



COMMERCE COMMISSION

**Draft Standard Terms Determination for the specified service
Co-location on cellular mobile transmission sites**

Draft determination under section 30K of the Telecommunications Act 2001

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**THERE IS NO CONFIDENTIAL MATERIAL CONTAINED IN THIS
DETERMINATION**

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LIST OF TERMS AND ABBREVIATIONS

Access Provider	means an access provider under the Act to whom an Access Seeker has made, or may make, a request.
Access Seeker	means an access seeker under the Act that has made, or may make, a request in writing pursuant to section 30S(1) of the Act to make the Mobile Co-location Service available on the Mobile Co-location Standard Terms.
Act	means the Telecommunications Act 2001.
Antenna	means equipment that transmits or receives radio communications signals in a cellular mobile telephone network.
Antenna Minimisation	means the process whereby an Access Provider's existing Antenna are replaced with Antenna that will facilitate the accommodation of Access Seeker Antenna on the Relevant Facilities.
Application	means any application made by the Access Seeker in relation to any part of the Mobile Co-location Service.
Approval to Build	means approval of the Access Seekers project plan, in accordance with clause 20.3 of the Mobile Co-location Operations Manual.
Commission	means the Commerce Commission in the course of performing its functions under the Act.
Common Format Site Database	means a database maintained by the Access Provider containing information on all of the Access Provider's Relevant Facilities.
Determination Date	means the date on which the Commission's determination relating to the Mobile Co-location Service comes into force.
End User	means an end-user as defined in the Mobile Co-location General Terms or the Act as the context requires.
Final Site Approval	means the notification provided to the Access Seeker confirming that the Access Provider is satisfied that all of the conditions contained in the preliminary site approval have been fulfilled.
Full Site Application	means a full Application for the Relevant Facilities that incorporates a detailed site design.
Initial Site Application	means a preliminary Application for the Mobile Co-location Service at the Relevant Facilities.
Interference Desktop Study	means a desktop study, undertaken by the Access Provider and any existing co-locators, of the Interference and Performance Degradation that may occur at the Relevant Facilities.

KPIs	means the key performance indicators set out in the Mobile Co-location Implementation Plan.
Mast	means any tower, pole, mast or other similar structure that is used, or that is to be used, for the transmission or reception of telecommunications via a cellular mobile telephone network. For the avoidance of doubt, a Mast may include a building, or part of a building.
Mobile Co-location Access Terms	means the terms set out in schedule 4 to the Mobile Co-location General Terms.
Mobile Co-location General Terms	means the document 'General Terms' that is part of the Mobile Co-location Standard Terms Determination.
Mobile Co-location Implementation Plan	means the document 'Mobile Co-location Implementation Plan' that is part of the Mobile Co-location Terms.
Mobile Co-location Interference Management and Design	means the Interference Management and Design document set out in schedule 5 to the Mobile Co-location General Terms.
Mobile Co-location Operations Manual	means the manual set out in schedule 3 to the Mobile Co-location General Terms.
Mobile Co-location Service	means the specified service “Co-location on cellular mobile transmission sites” as described in the Act.
Mobile Co-location Service Description	means the description set out in schedule 1 to the Mobile Co-location General Terms.
Mobile Co-location Service Level Terms	means the terms set out in schedule 2 to the Mobile Co-location General Terms.
Mobile Co-location Standard Terms Determination	means the standard terms determination in relation to the Mobile Co-location Service.
Mobile Co-location Terms	means, together, the Mobile Co-location General Terms, all of the schedules to the Mobile Co-location General Terms, and the Mobile Co-location Implementation Plan.
Multi-Site Application	means the process whereby an Access Seeker is able to submit one Application for the Mobile Co-location Service on ten or more Relevant Facilities.
Operational Support Systems	means the Access Provider’s fault management system and provisioning system, as set out in the Mobile Co-location Operations Manual.
Relevant Facilities	has the meaning given in clause 1.1 of the Mobile Co-location General Terms.
Service Levels	means the service levels set out in the Mobile Co-location Service Level Terms.
Site Data Pack	means an information pack supplied by the Access Provider in order for the Access Seeker to assess the suitability of the Relevant Facilities for the Mobile Co-location Service.

Soft Launch	means a period of testing to identify any faults in the Mobile Co-location Service (and its supporting systems or processes), that may prevent an Access Seeker or the Access Provider from fully implementing the Mobile Co-location Service in accordance with the Mobile Co-location Terms.
STD	means a standard terms determination made by the Commission under section 30M of the Act.
STP	means Vodafone's standard terms proposal for the Mobile Co-location Service.
TCF	means the Telecommunications Carriers' Forum.
UCLL	means unbundled copper local loop.
UCLL Co-location STD	means the standard terms determination in relation to the UCLL co-location service.

EXECUTIVE SUMMARY¹

- i. The Mobile Co-location Service is a service that enables co-location of cellular mobile telephone network transmission and reception equipment on or with an Access Provider's transmission sites.
- ii. The Mobile Co-location Service allows Access Seekers to utilise Access Providers' existing infrastructure in order to avoid unnecessary duplication of facilities (such as Masts). Co-location helps reduce network infrastructure costs for existing and potential mobile service providers by providing for the sharing of network infrastructure.
- iii. In this draft Standard Terms Determination, the Commission sets out its preliminary views on the non-price terms for the Mobile Co-location Service. The draft STD contains sufficient terms to allow Access Providers to make the service available to Access Seekers without the need for an Access Seeker to enter into a separate agreement with the Access Provider on non-price terms for provision of the service.
- iv. The Mobile Co-location Service is a specified service under the Telecommunications Act 2001. As a result, the Commission may not determine the "price payable" for the service.
- v. The Commission decided previously not to amend the status of the Mobile Co-location Service from a specified service to a designated service on the basis that price was not a barrier to co-location.² However, the Commission has the option to revisit the status of the Mobile Co-location Service as a specified service in the future if price becomes a barrier to concluding co-location agreements.

Access Seekers and Access Providers

- vi. Access Seekers and Access Providers of the Mobile Co-location Service are defined in the Act. The Commission considers that the following parties are eligible as Access Seekers and Access Providers of the Mobile Co-location Service as at the date of this draft STD:

Company	Access Provider eligibility	Access Seeker eligibility
Vodafone	Yes	Yes
Telecom	Yes	Yes
NZ Communications	Yes	Yes
Woosh	Yes	Yes
TeamTalk	Yes	Yes

¹ This executive summary does not form part of the Commission's Standard Terms Determination.

² Commerce Commission, *Schedule 3 Investigation into Amending the Co-location Service on Cellular Mobile Telephone Transmission Sites*, 14 December 2007.

Making Space Available

- vii. The Commission considers that interference management considerations are likely to play an important role in determining appropriate co-location solutions in New Zealand.
- viii. The Commission's view is that, if necessary in order to achieve a position on the Mast that will give the Access Seeker like-for-like coverage, the Access Seeker can require any of the following solutions be employed, provided that the proposed action does not result in unacceptable performance degradation:
 - rearrangement of the Access Provider's existing Antenna;
 - the use of Antenna Minimisation technology; and/or
 - Mast replacement, extension or revision.
- ix. The Commission has defined 'unacceptable performance degradation' in respect of interference management in this draft STD. The Commission considers that a total level of loss of 1.0dB in either the uplink budget or the downlink budget is an acceptable level of performance degradation resulting from provision of the Mobile Co-location Service.
- x. In defining unacceptable performance degradation at this level of loss, the Commission has considered that there are likely to be a number of efficiency trade-offs associated with co-location. The Commission's view is that the pro-competitive and efficiency benefits resulting from co-location are likely to outweigh any detriment to End Users as a result of performance degradation.

Efficient delivery of the Mobile Co-location Service

- xi. The Commission has not set any overall targets for the successful operationalisation of co-location sites, due to the complex nature of, and number of obligations and responsibilities involved in, the end-to-end process. Nevertheless, in order to help facilitate efficient provision of the Mobile Co-location Service to both existing and potential mobile service providers, the Commission has included the following requirements in the draft STD:
 - replacing the monthly capacity limit in the Operations Manual with a higher Service Level capacity limit for Site Data Pack Applications of 15 per week (or approximately 60 per month);
 - a Multi-Site Application process, which will enable Access Seekers to make bulk co-location Applications;
 - a modified service level penalty regime that is designed to ensure that Access Providers progress Applications for the Mobile Co-location Service in a timely manner (including a penalty of \$500 per day where an Access Provider fails to meet the relevant timeframes);
 - timeframes for tasks that Access Seekers are responsible for during the provisioning process, and associated penalties for materially exceeding

these timeframes (which could involve the Access Seeker being removed from the queue);

- reduced timeframes for a number of key Access Provider deliverables, as outlined in the Service Level Terms and Operations Manual;
 - Access Providers are to have a database of all of their mobile base stations (cell sites) to be completed and available to all Access Seekers within five working days of the final STD being released; and
 - a modified Soft Launch process, where the first 15 Applications received by each Access Provider for each task will not be subject to the performance penalties set out in the Service Level Terms.
- xii. The Commission expects that, under the terms of this draft STD, an indicative expedited timeframe for an Access Seeker to receive approval to build at an individual co-location site is approximately 125 working days. The Commission notes that it is likely that this timeframe will depend on a number of factors, including obtaining landlord and/or local authority consents, and the interference management issues that are encountered.

Greenfields Co-location

- xiii. Greenfields co-location sites are sites where two or more parties have an interest in providing mobile services in a location where there are no existing cell sites. The Commission considers that greenfields sites fall within the definition of the Mobile Co-location Service, and therefore, has included a compulsory greenfields process in the Operations Manual.

INTRODUCTION

Background to the determination process

1. On 21 December 2007, the Commission initiated the STD process in relation to the Mobile Co-location Service under section 30C of the Act.
2. The Commission conducted a scoping workshop on 31 January 2008. The workshop was open to all parties to the STD. The purpose of the workshop was to provide the Commission with information to assist it in specifying:
 - a reasonable period of time within which an Access Provider must submit a standard terms proposal under section 30F of the Act; and
 - any additional requirements for that proposal under 30F(2).
3. On 8 February 2008 the Commission gave written notice to Vodafone New Zealand Limited (Vodafone) requiring it to submit to the Commission an STP by 28 April 2008 that complied with section 30G of the Act. In the notice, the Commission specified a number of additional requirements that Vodafone was required to provide in its proposal.
4. On 28 April 2008, Vodafone submitted an STP for the Mobile Co-location Service. Public notice was given and interested parties were invited to make submissions.
5. On 26 May 2008, submissions on the STP were received from Telecom, NZ Communications, Kordia, Woosh, CallPlus and TUANZ. The Commission has considered these submissions in developing this draft STD.
6. Key documents are available on the Commission's website at:
<http://www.comcom.govt.nz/IndustryRegulation/Telecommunications/StandardTermsDeterminations/MobileColocationserviceStandardTermsDet/DecisionsList.aspx>

The Mobile Co-location Terms

7. This draft standard terms determination for co-location on cellular mobile transmission sites (Mobile Co-location) comprises this decision report and the appended Mobile Co-location Terms comprising:
 - Mobile Co-location General Terms;
 - Schedule 1: Mobile Co-location Service Description;
 - Schedule 2: Mobile Co-location Service Level Terms (SLT);
 - Schedule 3: Mobile Co-location Operations Manual;
 - Schedule 4: Mobile Co-location Access Terms;
 - Schedule 5: Mobile Co-location Interference Management and Design; and
 - Mobile Co-location Implementation Plan.
8. The following sections of this document provide explanation and reasons for the substantive changes, deletions or additions made to Vodafone's STP (and other substantive decisions that do not result in such amendments), in order to form the draft Mobile Co-location Terms that appear in Appendix A. For ease of reference and submission, amendments to Vodafone's STP appear as tracked changes.

9. The Commission notes that Vodafone used the UCLL Co-location STD as the starting point for its standard terms proposal for the Mobile Co-location Service. As a result, many of the terms in the Mobile Co-location General Terms and Schedules are common to the previous standard terms determinations³ released by the Commission. In the interests of brevity, parties are referred to the reasons provided in the previous STDs in respect of these common terms.
10. In some instances the Commission may agree with the general submission made by a party, but does not consider the proposed alternative wording to be appropriate. In such cases, the Commission has made amendments using its own wording.
11. The Commission's preliminary views on key issues relating to the Mobile Co-location Terms are set out in this draft STD. The Commission invites submissions on any issues discussed in this document.

³ Previous Standard Terms Determinations released by the Commission include UCLL, UCLL Co-location, UBA, UCLL Backhaul and UBA Backhaul.

THE DETERMINATION FRAMEWORK

Purpose

12. In making this draft STD, the Commission must consider the purpose set out in section 18 of the Telecommunications Act 2001. Section 18 describes the purpose of Part 2 and Schedules 1, 3, and 3A as follows:

18 Purpose

- (1) The purpose of this Part and Schedules 1 to 3 is 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.
- (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.
- (3) Except as otherwise expressly provided, nothing in this Act limits the application of this section.
- (4) Subsection (3) is for the avoidance of doubt.

13. Section 19 of the Act directs the Commission to consider, when making a determination under Part 2, whether the determination best gives, or is likely to best give, effect to the purpose set out in section 18. Section 19 states:

19 Commission and Minister must consider purpose set out in section 18 and additional matters

If the Commission or the Minister (as the case may be) is required under this Part or any of Schedules 1, 3, and 3A to make a recommendation, determination, or a decision, the Commission or the Minister must—

- (a) consider the purpose set out in section 18; and
- (b) if applicable, consider the additional matters set out in Schedule 1 regarding the application of section 18; and
- (c) make the recommendation, determination, or decision that the Commission or Minister considers best gives, or is likely to best give, effect to the purpose set out in section 18.

Statutory requirements for a draft STD

14. Not later than 60 working days after the closing date for submissions on an STP, section 30K(1) requires the Commission to make reasonable efforts to:
- (a) determine the terms on which the service must be supplied; and
 - (b) prepare a draft standard terms determination containing those terms; and
 - (c) provide a copy of the draft standard terms determination to all parties to the determination; and
 - (d) give public notice of the draft standard terms determination; and
 - (e) include in the public notice the closing date for submissions.

15. The Commission issues this draft STD within the 60 working day timeframe.
16. Once the Commission has completed the required consultation under the Act, the Commission must in accordance with section 30M:
 - (a) prepare a standard terms determination; and
 - (b) provide a copy of the standard terms determination to all parties to the determination; and
 - (c) give public notice of the standard terms determination.

The Service Description

17. This draft STD concerns the specified service of “Co-location on cellular mobile transmission sites” as set out in Part 3 of Schedule 1 to the Act. This service is defined as follows:

Co-location on cellular mobile transmission sites

<i>Description of service:</i>	A service that enables co-location of cellular mobile telephone network transmission and reception equipment (including any necessary supporting equipment on or with the following facilities (relevant facilities)): <ol style="list-style-type: none"> (a) any towers, poles, masts, or other similar structures— <ol style="list-style-type: none"> (i) that are used for the transmission or reception of telecommunications via a cellular mobile telephone network; and (ii) that are owned, managed, or leased by the access provider; (b) all sites, buildings, or utility services that are associated with the kinds of structures referred to in paragraph (a)
<i>Conditions:</i>	Nil
<i>Access provider:</i>	Every person who operates a cellular mobile telephone network
<i>Access seeker:</i>	Any person who— <ol style="list-style-type: none"> (a) operates, or is likely to operate, a cellular mobile telephone network; and (b) seeks access to the service
<i>Access principles:</i>	The standard access principles set out in clause 5
<i>Limits on access principles:</i>	The limits set out in clause 6 and additional limits, which must be set by taking the following matters into account: <ol style="list-style-type: none"> (a) the access provider’s current and reasonable forecast requirements for capacity on the relevant facilities; (b) the management of existing or potential radio spectrum interference arising from use of the relevant facilities; (c) all relevant requirements under the Resource Management Act 1991:

- (d) all relevant health and safety requirements under any enactment;
- (e) all existing contractual obligations to third parties, including lessors of land on which relevant facilities are located;
- (f) the interests of third parties who use the relevant facilities

Additional matters that must be considered regarding the application of section 18:

Nil

Access Providers and Access Seekers

- 18. The Act defines Access Seekers and Access Providers with reference to “cellular mobile telephone network”. In order to determine if a person is an Access Provider or an Access Seeker it is necessary to determine whether that party operates a network that is a cellular mobile telephone network. A person may also be an Access Seeker if that person is “likely” to operate a cellular mobile telephone network.
- 19. Further discussion on the Commission’s view on who qualifies as an Access Seeker or an Access Provider is set out at paragraphs 91 - 100.

Timeframe for supply to Access Seekers

- 20. The Commission is required by section 300(1)(b) to specify in the STD the timeframes within which Access Providers must make the service available to:
 - every person who is *already* an Access Seeker at the time the STD is made; and
 - every person who becomes an Access Seeker *after* the STD is made.
- 21. The timeframes within which Access Providers must make the service available are contained in the Implementation Plan in Appendix A.

Access principles and limits on those principles

- 22. Clauses 5 and 6 of Schedule 1 to the Act apply in relation to the Mobile Co-location Service. They provide:

5 Standard access principles for designated access services and specified services

The following standard access principles apply to designated access services and specified services:

- (a) *principle 1*: the access provider must provide the service to the access seeker in a timely manner;
- (b) *principle 2*: the service must be supplied to a standard that is consistent with international best practice;
- (c) *principle 3*: the access provider must provide the service on terms and conditions on which the access provider provides the service to itself;

- (d) *principle 4*: the access provider must, if requested, provide an access seeker with information about a designated access service or specified service at the same level of detail, and within the same time frame, that the access provider would provide that information had it been requested by one of its own business units.

6 Limits on application of standard access principles set out in clause 5

- (1) Principles 1 to 4 set out in clause 5 are limited by the following factors:
 - (a) reasonable technical and operational practicability having regard to the access provider's network;
 - (b) network security and safety;
 - (c) existing legal duties on the access provider to provide a defined level of service to uses of the service;
 - (d) the inability, or likely inability, of the access seeker to comply with any reasonable conditions on which the service is supplied;
 - (e) any request for a lesser standard of service from an access seeker.
- (2) Principle 4 set out in clause 5—
 - (a) does not extend to any information about identifiable individual customers of the access provider; and
 - (b) is subject to the requirement that any confidential information provided to the access seeker, in accordance with that principle, must be kept confidential to that access seeker.

23. There are also additional limits on the access principles specific to the Mobile Co-location Service:

- (a) the access provider's current and reasonable forecast requirements for capacity on relevant facilities;
- (b) the management of existing or potential radio spectrum interference arising from use of the relevant facilities;
- (c) all relevant requirements under the Resource Management Act 1991;
- (d) all relevant health and safety requirements under any enactment;
- (e) all existing contractual obligations to third parties, including lessors of land on which relevant facilities are located;
- (f) the interests of third parties who use the relevant facilities.

24. Vodafone submitted that co-location should not require Access Providers to move, add or change their transmission and reception equipment where this compromises the limits on the access principles.⁴ Vodafone further submitted that to require such steps in a "blanket" fashion to all sites would compromise the level of service available to End Users of cellular mobile network services, and therefore not be in the best interests of End Users of mobile telecommunications services.

25. The Commission's view is that the limiting factors listed in clause 6 of Schedule 1 to the Act and in the Mobile Co-location Service Description are not absolute

⁴ Vodafone, *Standard Terms Proposal for Mobile Co-location*, 28 April 2008, p 57, para 161.

limits on the scope of the Mobile Co-location Service on a site-by-site basis, as appears to be suggested in Vodafone's submission. The Commission considers that the existence of these factors does not negate the application of the access principles; those factors simply limit the scope of the application of the access principles, which remain relevant considerations throughout the terms of the draft STD.

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| 26. The Commission has considered how best to balance the access principles and limiting factors in considering the terms of this draft STD. The Commission invites submissions from parties on whether this balance is appropriate. |
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Information disclosure

27. Clause 2.3 of the General Terms of the draft STD incorporates the access principles. The Commission may require an Access Provider, in accordance with section 69ZC of the Act, to prepare and disclose information about the operation and behaviour of any part of its business that provides prescribed designated or specified services. The Commission may require the Access Provider to adopt, in the preparation or compilation of that information, any methodology that the Commission requires. The Commission may require other information disclosure as further set out in that section of the Act. The Commission notes that the purpose of such disclosure is specified in section 69ZC(1)(b) as follows:
- (b) for the purpose of enabling monitoring of, and facilitating compliance with, prescribed access principles—
 - (i) that are incorporated in any determination, approved code, or registered undertaking; and
 - (ii) with which the access provider is required to comply.
28. At this stage, the Commission does not intend to seek information disclosure pursuant to section 69ZC as part of this STD, but may do so in the future.

Compliance with access principle 3

29. Access principle 3 requires that Access Providers provide the Mobile Co-location Service on terms and conditions (excluding price) that are consistent with those terms and conditions on which each of those Access Providers provides the service to itself.
30. Vodafone did not provide a submission on how to ensure consistency with access principle 3 in providing Mobile Co-location.
31. NZ Communications submitted that Mobile Co-location should occur on the basis that Access Providers are required to provide Access Seekers with “like-for-like” coverage. This like-for-like principle requires Access Providers to provide Access Seekers with a level of coverage consistent with the level that the Access Provider enjoys.⁵

⁵ NZ Communications, *Submission to the Commerce Commission in relation to the STP for the Co-location on Cellular Mobile Transmission Sites Service*, 24 May 2008, p 4.

32. The Commission's view is that an obligation to provide like-for-like coverage ensures consistency with access principle 3. In some circumstances this may require that an Access Provider optimises use of its facilities by moving Antenna or utilising Antenna Minimisation technology. However, any obligation to provide like-for-like coverage is subject to the factors that constitute limits on the access principles. The Commission considers that the appropriate balance is an obligation on Access Providers is to provide like-for-like coverage to Access Seekers, or as near as is possible to like-for-like coverage given the limits on access principle 3.
33. It is likely that interference management considerations will play an important role in determining co-location solutions that are appropriate for the New Zealand environment and on the extent to which like-for-like coverage can be provided.
34. The Commission has defined unacceptable performance degradation as set out in paragraph 242. The Commission considers that an Access Seeker should be able to co-locate on an Access Provider's Relevant Facilities under the terms of the Mobile Co-location STD so long as the Access Seeker's proposed design will not cause unacceptable performance degradation to the Access Provider's existing services.
35. The Commission's view is that, if necessary in order to achieve a position on the Mast that will give the Access Seeker like-for-like coverage, the Access Seeker can require any of the following solutions to be employed (at the Access Seeker's cost and subject to the conditions around unacceptable performance degradation):
- rearrangement of the Access Provider's existing Antenna;
 - the use of Antenna Minimisation technology; and/or
 - Mast replacement, extension or revision.
36. Telecom submitted that there should not be any requirement to use Antenna Minimisation technology in the Mobile Co-location STD. In particular, Telecom submitted that requiring Access Providers to use Antenna Minimisation technology would not be appropriate because it would be likely to impact on the quality of service available to End Users of mobile telephone services.⁶ Telecom further submitted that requiring Antenna Minimisation would discourage the building of larger infrastructure that could support multiple co-locating parties, which would not be in the long-term interests of End Users.
37. As noted in paragraphs 243 to 258, the Commission is of the view that significant pro-competitive and efficiency benefits are likely to result from co-location in New Zealand. The Commission considers that the use of Antenna Minimisation technology is a viable option for maximising the number of potential co-location sites, and therefore, ensuring that scarce resources are appropriately used and that these pro-competitive and efficiency benefits are realised.
38. The Commission's view is that Antenna Minimisation, if used appropriately, is one of a number of important tools that help ensure that the Mobile Co-location Service is consistent with the access principles in the Act (and the limits on

⁶ Telecom, *Submission on Vodafone Mobile Co-location STP*, 23 May 2008, p 16, para 4.6.

those access principles) and in the long-term benefit of End Users. The Commission has included provisions in the Operations Manual to ensure that Antenna Minimisation is used in an appropriate way so that any detriment suffered by End Users in terms of quality of service is minimal and outweighed by the long-term benefits to End Users as a result of increased competition.

Access Provider Forecasting

39. As outlined below in the Operations Manual section of this document, an Access Provider is able to reserve space on its Relevant Facilities for its reasonable requirements as part of a two year rolling forecast.
40. The Commission considers that a balance needs to be struck between an Access Provider's need to reserve space for its reasonable forecast requirements and making the most efficient use of Relevant Facilities in the short term. In particular, the Commission's view is that Access Provider forecasts should not prevent an Access Seeker who is willing and able to co-locate *immediately* from gaining access to that space where this does not unreasonably interfere with the Access Provider's future use of that space in accordance with its forecast requirements.
41. The Commission also considers that there should be incentives on Access Providers to forecast their future space requirements accurately to ensure that the most efficient use of available space is made.
42. The Commission's view is that an Access Seeker should be able to locate its transmission and reception equipment on or with an Access Provider's Relevant Facilities for the period of time until the Access Provider is in a position to install the equipment in the space that is the subject of its forecast. When the Access Provider wishes to use that space, the Access Provider will give the Access Seeker six months' notice, and the Access Seeker will be required, at its own cost, to:
 - relocate its equipment on the Access Provider's Mast (if possible); or
 - remove its equipment from that Relevant Facility.
43. If the Access Provider does not make use of the space in accordance with its forecast within the forecast period (i.e. 2 years), the Access Seeker may continue to occupy the space on the Mast as if there was never any Access Provider forecast for that space in the first instance. The Commission has included provisions in the Operations Manual to give effect to this view.
44. The Commission considers that the ability for an Access Seeker to co-locate under these circumstances will allow an Access Seeker to gain access to Relevant Facilities in a manner consistent with access principle 3 and to provide service to its customer base in the short term, while providing an opportunity for Access Seekers (and Access Providers) to develop a longer-term solution.

Price and non-price terms

45. The Mobile Co-location Service is listed as a specified service under Part 3 of Schedule 1 to the Act. As a specified service, determining the "price payable" for the Mobile Co-location Service is beyond the Commission's statutory mandate.

46. The Commission has previously recommended that Mobile Co-location should not be moved from a specified service to a designated service.⁷ The basis for this recommendation was an industry view, communicated to the Commission, that price was not a barrier to Mobile Co-location.
47. Vodafone has included in its STP terms requiring the “Charges” (the price payable by an Access Seeker for Mobile Co-location) to be agreed by the Access Provider and the Access Seeker before the delivery of the Service.⁸
48. The Commission’s view is that any terms requiring agreement between the Access Providers and Access Seekers on price are not required given the findings of the Commission in the Schedule 3 Investigation into Mobile Co-location. In particular, the Commission concluded that the issues preventing effective co-location in the mobile services market are non-price related, and therefore, does not expect disputes regarding the price payable to arise.
49. If circumstances change in the future, and price becomes a barrier to Mobile Co-location, the Commission intends to immediately review the status of Mobile Co-location as a specified service.

Rapid multi access period

50. In its submission, NZ Communications urged the Commission to consider the unique context of the New Zealand mobile market and the need for new entrants to quickly achieve a situation of network parity with the incumbents.⁹ NZ Communications suggested the inclusion of a new Schedule 8 in the STD in order to facilitate a “Rapid Multi Access Period”.
51. This proposed Schedule 8 was prepared by NZ Communications’ operational staff, and is intended to include those terms that are required to facilitate Rapid Multi Access during the start up period. NZ Communications proposed that, for the period of 24 months immediately following the date on which an Access Seeker makes its first Request to an Access Provider, the provisions of Schedule 8 shall prevail over the other provisions in the STD to the extent of any inconsistency.
52. The Commission acknowledges the importance of a new entrant and existing operators having the ability to roll out new mobile network equipment in a timely manner, and considers that an effective co-location regime will bring significant benefits in this regard. However, for a number of reasons, the Commission does not support the inclusion of a Rapid Multi Access Schedule as proposed by NZ Communications.
53. The Commission has not accepted Schedule 8, as proposed by NZ Communications, primarily on the grounds that it:
 - creates what is effectively a 'shadow' STD which would usurp key provisions in the Mobile-Co-location Terms (such as those relating to Antenna

⁷ Commerce Commission, *Schedule 3 Investigation into Amending the Co-location Service on Cellular Mobile Telephone Transmission Sites*, 14 December 2007.

⁸ Vodafone, *Standard Terms Proposal for Mobile Co-location*, 28 April 2008, General Terms, clauses 7.2 and 14.5.

⁹ NZ Communications, *Submission to the Commerce Commission in relation to the STP for the Co-location on Cellular Mobile Transmission Sites Service*, 24 May 2008, p 1.

Minimisation, interference, provisioning, and service levels). Such provisions are able to be adequately dealt with in a holistic manner in the Mobile Co-location Terms, associated Schedules, and the Implementation Plan;

- sets co-location targets which may unfairly penalise Access Providers (should those targets not be met). Such targets are inappropriate given that a number of parties have decision-making responsibilities in the realisation of the co-location service (such as landlords, local authorities, and the Access Seeker themselves), rather than solely the Access Provider; and
 - attempts to require Access Providers to provide services to Access Seekers before the terms of the STD have been finalised.
54. The Commission has made a number of significant amendments to the existing Schedules in order to help facilitate the rapid roll out of new cellular mobile network equipment. These amendments include:
- the requirement for the Access Providers' Common Format Site Database to be operational five working days after the final STD is released;
 - the introduction of a Multi-Site Application process;
 - replacement of the monthly capacity limit in the Operations Manual with a higher Service Level capacity limit;
 - the inclusion of a comprehensive Service Level penalty regime, to ensure that Access Providers are incentivised to progress applications in a timely manner; and
 - the reduction in the timeframe for a number of key Access Provider deliverables, as outlined in the Service Level Terms and Operations Manual.
55. These amendments are discussed in further detail throughout below in the Operations Manual section of this document.

The terms of a final standard terms determination

56. The Commission is to exercise its discretion as to the contents of the STD in accordance with the Act. Section 300 specifies the matters to be included in the final standard terms determination as follows:

300 Matters to be included in standard terms determination: general

- (1) A standard terms determination must—
 - (a) specify sufficient terms to allow, without the need for the access seeker to enter into an agreement with the access provider, the designated access service or specified service to be made available within the time frames specified under paragraph (b); and
 - (b) state the time frames within which the access provider must make the service available to—
 - (i) every person who is already an access seeker when the standard terms determination is made; and

- (ii) every person who becomes an access seeker after the standard terms determination is made; and
 - (c) specify the reasons for the standard terms determination; and
 - (d) specify the terms and conditions (if any) on which the standard terms determination is made; and
 - (e) specify the actions (if any) that a party to the standard terms determination must take or refrain from taking.
- (2) To avoid doubt, a standard terms determination may also include, without limitation, terms concerning any or all of the following matters:
- (a) dispute resolution procedures:
 - (b) the consequences of a breach of the determination (including provision for set-off or withholding rights, or liquidated damages):
 - (c) suspension and termination of the service:
 - (d) procedures for, or restrictions on, assignment of the service.
- (3) The Commission must identify which of the terms (if any) specified in a standard terms determination are allowed to be varied, on an application made under section 30V by a party to that determination, under a residual terms determination.

57. A commencement date will be provided in the final STD. However, in accordance with section 30Q no expiry date for the STD will be included.

Application of standard terms determination

58. Section 30S of the Act specifies the application of an STD and provides that:

30S Application of standard terms determination

- (1) If the Commission has made a standard terms determination for a designated access service or a specified service,—
 - (a) an access seeker of the service may request an access provider in writing to supply the service on the terms specified in that determination; and
 - (b) the access provider must comply with the request.
- (2) However, subsection (1) does not apply if,—
 - (a) after the date of on which the standard terms determination for the service was made, the access seeker and the access provider entered into an agreement for the supply of the service; and
 - (b) it is less than 18 months since the date on which that agreement came into force.
- (3) In complying with a request from an access seeker under subsection (1), the access provider must, if the Commission has made a residual terms determination for the service under section 30ZB in relation to that access seeker and that access provider, supply the service to that access seeker on the

terms specified in that determination, as well as on the terms specified in the standard terms determination.

- (4) However, if there is any inconsistency between the terms specified in a residual terms determination in relation to that access seeker and that access provider and the terms specified in a standard terms determination, the terms specified in the residual terms determination prevail.

Variation or review of a standard terms determination

59. The Commission is required by section 30O(3) to identify which of the terms (if any) specified in an STD are allowed to be varied on an application for a residual terms determination made under section 30V. The Commission is also able to address matters that were not addressed in the STD.
60. It is the Commission's view that the following terms in this STD may not be varied:
 - Schedule 1: Mobile Co-location Service Description; and
 - Mobile Co-location Implementation Plan.
61. The Commission may also, on its own initiative, commence a review at any time of all or any of the terms of an STD (section 30R).

Breach of an STD

62. The STD provides a range of dispute resolution procedures, including penalties if specific Service Levels are not met. However, the STD does not prevent any party from seeking remedies available to it under the Act.
63. Under section 156N(b) of the Act, an STD is an enforceable matter. As such, an Access Provider or an Access Seeker may make a written complaint to the Commission alleging a breach of the STD. The Commission must then decide what action, if any, to take, including whether to take action in the High Court. An Access Provider or an Access Seeker may also take action in the High Court under section 156P(1) of the Act.
64. On the application of the Commission, the High Court may, in addition to any other remedies, order a pecuniary penalty if there has been a breach of the STD.

SERVICE DESCRIPTION

65. The Mobile Co-location Service is described in Appendix A: Schedule 1 – Mobile Co-location Service Description as follows:

The Mobile Co-location Service is a service (and its associated functions, including any associated functions of the Access Provider’s operational support systems) that enables co-location of Cellular Mobile Telephone Network transmission and reception equipment (including any necessary supporting equipment) on or with the Relevant Facilities.

66. An indicative diagram of the Mobile Co-location Service is shown below:

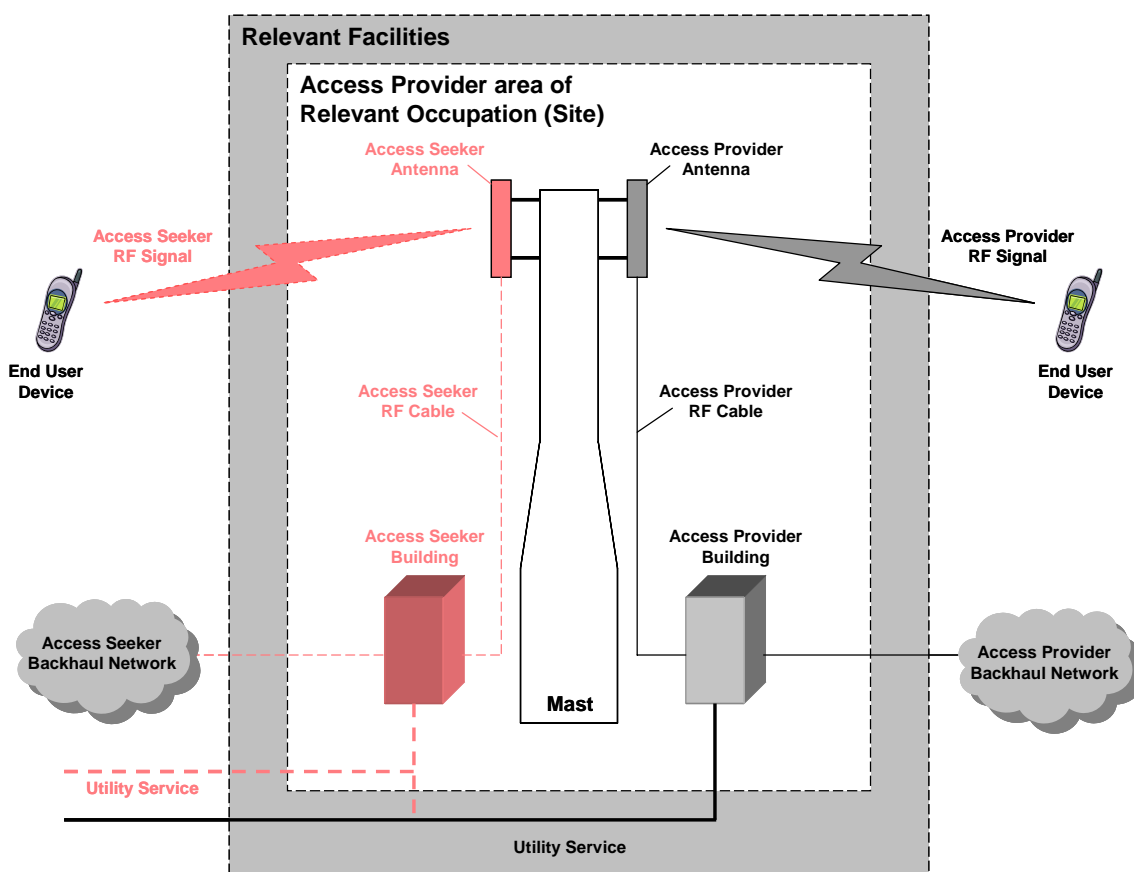


Figure 1: Service Description diagram

Definition of cellular mobile telephone network

67. The Mobile Co-location Service Description hinges on the definition of “cellular mobile telephone network”.
68. Vodafone defined “cellular mobile telephone network” in its STP as follows:¹⁰

Cellular Mobile Telephone Network means a telecommunications network:

- (a) that is designed to enable:

¹⁰ Vodafone, *Standard Terms Proposal for Mobile Co-location*, 28 April 2008, General Terms clause 1.1.

- (i) two-way communications between End Users; and
 - (ii) an End User of the service that uses the network to use the service while moving continuously between places or when standing still; and
- (b) that has the following characteristics:
- (i) the End User equipment used in relation to the network has a wireless connection to the network;
 - (ii) the service area of the network is divided into a number of contiguous geographical radio coverage areas (known as **cells**) and each cell is served by an antenna and a base station, which transmit and receives signals to and from End User equipment within that cell;
 - (iii) the service that uses the network is capable of re-using the radio frequencies in different cells within the service area; and
 - (iv) as the End User equipment travels between adjacent cells, the service that uses the network uses intercell hand-over functions to:
 - a. determine in which cell the equipment is located; and
 - b. allow the transmit and receive signal connection to transfer from one base station to an adjacent base station when the End User equipment moves out of that cell to an adjacent cell.
69. Kordia submitted that the care should be taken to not unnecessarily or unduly narrow the scope of the Mobile Co-location Service. For this reason, Kordia submitted that the definitions of “Cellular Mobile Telephone Network”, “Intercell Handover Functionality” and “Mobile Telecommunications Service” as set out in the TCF recommendations (although these were not unanimously agreed to by the working party) should be used in preference to Vodafone’s definition of Cellular Mobile Telephone Network.¹¹
70. Kordia’s view is supported by CallPlus, who submitted that Vodafone’s definition may limit applications and future technologies.¹²
71. The Commission agrees that the definition of Cellular Mobile Telephone Network should be broad enough not to limit applications and future technologies. The Commission considers that Vodafone’s definition of Cellular Mobile Telephone Network does not unduly limit applications and future technologies.
72. The Commission’s view is that Vodafone’s definition of “cellular mobile telephone network” incorporates the fundamental underlying characteristics of such a network as commonly understood, and is consistent with the provisions of the Act.

Other similar structures

73. The description of service in the Act defines “relevant facilities” as follows:¹³
- (a) any towers, poles, masts, or other similar structures-
 - (i) that are used for the transmission or reception of telecommunications via a cellular mobile telephone network; and
 - (ii) that are owned, managed, or leased by the access provider:
 - (b) all sites, buildings, or utility services that are associated with the kinds of structures referred to in paragraph (a)

¹¹ Kordia, *Consultation on Vodafone’s Standard Terms Proposal for Mobile Co-location*, 26 May 2008, p 15, para 16.3-16.4.

¹² CallPlus, *Consultation on Vodafone’s Standard Terms Proposal for Mobile Co-location*, 26 May 2008.

¹³ Telecommunications Act 2001, Sch 1, Part 3.

74. The Commission considers that clarification of the meaning of “other similar structures” is required in order to determine the scope of those structures which can be considered to be Relevant Facilities.
75. The Commission’s view is that any structure used specifically (though not necessarily exclusively) to elevate mobile network equipment is likely be a “similar structure”. For example, the Commission considers that a similar structure may include a building, or part of a building such as a chimney, with sufficient height that equipment can be attached directly without the need for a Mast or other additional elevating structure.

The distinction between co-location and co-siting

76. The Service Description in Vodafone’s STP specifically excludes co-siting. In particular, this exclusion is listed in Vodafone’s Service Description as follows:
 - 4.1 The Mobile Co-location Service specifically excludes, without limitation:
....
 - 4.1.6 the location of access seeker Equipment in proximity to an access provider’s Site (colloquially referred to as “co-siting”) in a manner which does not otherwise come within the definition of the Mobile Co-location Service in this Schedule 1.¹⁴
77. Vodafone’s use of the phrase “in proximity to” to clarify the meaning of “co-siting” suggests that co-location is limited to situations where equipment is located on the access provider’s physical infrastructure, not simply on the same site or same place as the access provider’s physical infrastructure and technical equipment.
78. The Commission considers that the concept of co-siting is not clearly defined in Vodafone’s STP.
79. The description of service in the Act describes the Mobile Co-location Service in terms of the co-location of cellular mobile telephone network transmission and reception equipment (and supporting equipment) on or with relevant facilities. The Commission considers that the essence of co-location as described in the Act is the location of Access Seeker equipment on Relevant Facilities that are owned by, or otherwise under the effective control of, an Access Provider.
80. The Commission’s view is that location of Access Seeker equipment in a manner that falls outside of this interpretation of the Mobile Co-location Service is classed as co-siting. As co-siting falls outside the scope of the Mobile Co-location Service by definition, the Commission considers that the specific exclusion of co-siting in the Service Description is unnecessary.

Greenfields co-location

81. Greenfields sites are sites where two or more parties have an interest in providing mobile services in a location where there are no existing Relevant Facilities.¹⁵ Vodafone’s STP incorporates a voluntary mechanism for two or

¹⁴ Vodafone, *Standard Terms Proposal for Mobile Co-location*, 28 April 2008, Schedule 1: Service Description, p 2, clause 4.1.6

¹⁵ *ibid*, “Operations Manual” p 15, clause 11.2.

- more parties to work together in the construction of new facilities where those parties have common interests in a greenfields site.
82. Vodafone submitted that greenfields sites do not come within the definition of the Mobile Co-location Service as the description of service in the Act only applies to existing Relevant Facilities.¹⁶ Telecom's submission supports Vodafone's approach to greenfield sites.¹⁷
83. Kordia submitted that it would be contrary to public policy if Access Providers could continue to erect masts that are not designed for the purpose of accommodating multiple operators.¹⁸ Similarly, TUANZ expressed concern that a voluntary greenfields process would encourage a reluctant Access Provider to design and build new facilities in a way that would limit the options for an Access Seeker.¹⁹
84. NZ Communications also supports the view that greenfields sites fall within the service description.²⁰
85. The Commission considers that Vodafone's interpretation of the description of service in the Act fails to take into account the broader context of the description of service, including its purpose to promote competition in telecommunications markets for the long-term benefit of End Users of telecommunications services within New Zealand, and the public policy arguments raised by Kordia and TUANZ.
86. The Commission's view is that sites that are not yet built do fall within the description of service in the Act. The Mobile Co-location Service Description in the STD has been amended accordingly. As discussed in the Operations Manual section below, the greenfields process included in Vodafone's STP has also been amended to reflect this position.

Level of detail

87. Woosh submitted that the service description in Vodafone's STP is faithful to the TCF deliberation, but is still vague. Woosh noted that it expects a clearer Service Description to evolve as the STD process continues.²¹
88. The Commission agrees with Woosh's submission, and has clarified the definition of the Mobile Co-location Service as outlined in this section.
89. NZ Communications submitted that the description of the Mobile Co-location Service in Vodafone's STP is inadequate, and that all of the elements that make up the Mobile Co-location Service should be included in the service description.

¹⁶ Vodafone, *Standard Terms Proposal for Mobile Co-location*, 28 April 2008, p 40, para 115.

¹⁷ Telecom, *Submission on Vodafone Mobile Co-location STP*, 23 May 2008, p 16, para 4.7.

¹⁸ Kordia, *Consultation on Vodafone's Standard Terms Proposal for Mobile Co-location*, 26 May 2008, p 17, para 19.4.

¹⁹ TUANZ, *Submission to the Commerce Commission – Consultation on Vodafone's Standard Terms Proposal for Mobile Co-location*, 19 May 2008, p 2.

²⁰ NZ Communications, *Submission to the Commerce Commission in relation to the STP for the Co-location on Cellular Mobile Transmission Sites Service*, 24 May 2008, p 12.

²¹ Woosh, *Submission on the Mobile Co-location STP*, 26 May 2008

NZ Communications proposed a new clause to help clarify what the Mobile Co-location Service is.²²

90. The Commission has amended the Service Description set out in Schedule 1 of the Mobile Co-location Terms to help address these concerns. In particular, the Commission has sought to expressly state in the service description:
- those facilities that form the Relevant Facilities that are available for co-location;
 - the utility services that form part of the Mobile Service; and
 - that the Mobile Co-location Service includes associated functions of the Access Provider's operational support systems.

²² NZ Communications, *Submission to the Commerce Commission in relation to the STP for the Co-location on Cellular Mobile Transmission Sites Service*, 24 May 2008, p 12.

ACCESS SEEKERS AND ACCESS PROVIDERS

91. The Act defines Access Seekers and Access Providers of the Mobile Co-location Service with reference to “cellular mobile telephone network”.²³ For the purposes of this draft STD, the Commission considers that it is necessary to determine the eligibility of Access Seekers and Access Providers of the Mobile Co-location Service.
92. Under the Act, the definitions of ‘access provider’ and ‘access seeker’ for the Mobile Co-location Service are as follows:

Access provider:	Every person who operates a cellular mobile telephone network
Access seeker:	Any person who- (a) operates, or is likely to operate, a cellular mobile telephone network; and (b) seeks access to the service

93. The definition of “cellular mobile telephone network” is therefore relevant for determining whether a party is an Access Provider or an Access Seeker under the Act.

Operates a ‘cellular mobile telephone network’

94. In order to determine if a particular entity is an Access Provider or an Access Seeker it is necessary to determine whether that party operates (or in the case of an Access Seeker, operates, or is ‘likely to’ operate) a cellular mobile telephone network. This may be done by determining whether the relevant party operates a telecommunications network with the characteristics set out in the definition of Cellular Mobile Telephone Network in the Mobile Co-location General Terms.
95. In the case of an Access Seeker, the Commission’s view is that a person will be likely to operate a cellular mobile telephone network where that person has a genuine and feasible intention to operate such a network.
96. The Commission’s determination regarding the eligibility of Access Seekers and Access Providers as at the date of this draft STD is attached as Appendix B and is summarised as follows:

Company	Access Provider eligibility	Access Seeker eligibility
Vodafone	Yes	Yes
Telecom	Yes	Yes
NZ Communications	Yes	Yes
Woosh	Yes	Yes
TeamTalk	Yes	Yes

Table 1: Eligibility of Access Seekers and Access Providers

²³ Telecommunications Act 2001, sch 1, Part 3.

97. In order to be considered as an Access Seeker, a party must seek access to the service. Therefore, the Commission can only determine the parties that it considers are *eligible* as Access Seekers because they operate, or are likely to operate, a cellular mobile telephone network.

98. The Commission invites submissions on the list of eligible Access Seekers and Access Providers in paragraph 96 above.

Entry and exit from the market

99. The Commission notes that there is potential for entry into and exit from the cellular mobile telecommunications market throughout the term of the STD. The Commission will maintain a register of eligible Access Seekers and Access Providers on its website.

100. Any party that is determined by the Commission to be an eligible Access Provider after the date of the final STD will be bound to the terms of the final STD from the date at which they are determined to be an eligible Access Provider.

GENERAL TERMS

Agreement on charges

101. Clauses 7.2 and 14.5 of Vodafone's STP required the Access Provider and Access Seeker to agree all Charges payable by the Access Seeker, and stated that if these Charges have not been agreed prior to the date that the Access Provider receives the Access Seeker's request for the service, then the Access Provider and Access Seeker must meet within 10 working days to endeavour to agree the Charges payable.
102. As noted in paragraph 48 above, the Commission's view is that all terms requiring agreement on the price payable should be removed as the Commission was advised at the mobile Schedule 3 Investigation conference that price is not a barrier to Mobile Co-location. Therefore, clauses 7.2 and 14.5 have been removed from the General Terms in the draft STD.
103. If circumstances change in the future, and price becomes a barrier to Mobile Co-location, the Commission intends to immediately review the status of Mobile Co-location as a specified service.

Dispute resolution

104. The Commission received a number of submissions on the efficacy of the dispute resolution process set out in the General Terms.
105. In particular, TUANZ expressed concern that it seems possible that Access Providers could seek to draw out any formal dispute resolution through each process one after the other, as a means to delay and discourage market entry by Access Seekers.²⁴
106. Kordia submitted that the Radiocommunications Act 1989 sets out dispute resolution procedures specifically relating to harmful interference, and that these are the appropriate procedures for resolving all disputes related to interference management.²⁵
107. The Commission considers that the dispute resolution mechanism set out in the draft STD is largely appropriate. The Commission has amended the dispute resolution process to ensure that the delivery of the service is expedited, and to avoid the possibility of dispute resolution being used as a delaying tactic. The Commission will also be monitoring the reports received on decisions made in accordance with the dispute resolution process.

Confidential customer information

108. The Commission notes that the Mobile Co-location Service is a service which relates to the use of Relevant Facilities where the contractual parties are the Access Seeker and Access Provider.
109. Customers and/or End Users are subscribers of the services provided by Access Seekers and Access Providers of the Mobile Co-location Service. For the UCLL service, Telecom (the Access Provider) requires Customer and/or End User

²⁴ TUANZ, *Submission to Commerce Commission- Consultation on Vodafone's Standard Terms Proposal for Mobile Co-location*, 19 May 2008, p 5

²⁵ Kordia Group, *Submission on Mobile Co-location*, 26 May 2008, p 22 para 23.2

information from Access Seekers of the service, as this information is required in order to provision the service and restore faults.

110. However, the Commission is of the view that such information will not be required by Access Providers of Mobile Co-location, due to the nature of the service. Therefore, the Commission considers that the Confidential Customer Information provisions are able to be removed from the General Terms.

SERVICE LEVEL TERMS

Additional service levels

111. Telecom proposed that additional Service Levels be included in Appendix 1 of the Service Level Terms, including Service Levels for:
- Access Provider acknowledgement of receipt of various Access Seeker applications and documents;
 - the Interference Desktop Study;
 - fault management tasks; and
 - metrics for the availability of the Provisioning System, Network Operation Centre, Fault Management System, and Common Format Site Database.²⁶
112. The Commission has included additional Service Levels in the draft Mobile Co-location Service Level Terms, including, but not limited to, most of the additions suggested by Telecom. The Commission aimed to include a Service Level for every task that is the responsibility of the Access Provider, in order to provide Access Seekers with greater certainty of the timeframes for delivery of key tasks and to ensure that they have appropriate access to necessary systems (for example, the Common Format Site Database).
113. The Commission invites submissions on the level of detail in the Service Levels in Appendix 1 of the Service Level Terms provided in the draft STD.

Service level exclusions

114. Section 4 of the draft Service Level Terms sets out a list of exclusions where Service Levels will not apply. The Commission has removed this clause so that Service Levels will still apply where a default has been caused by a third party, on the grounds that the Access Provider is likely to have a contractual relationship with any third party that may cause such a default, and the default is therefore more likely to be within the control of the Access Provider rather than the Access Seeker.

Service level time periods

115. NZ Communications submitted that the time periods for a number of Service Levels outlined in Appendix 1 of the Service Level Terms should be reduced.²⁷
116. The Commission's view on the appropriate timeframes for Service Levels is outlined in the draft STD. Changes made by the Commission include, for example, reducing the time for the approval of Full Site Applications from 20 working days, as proposed in Vodafone's STP, to 10 working days.
117. In setting these timeframes, the Commission has aimed to strike an appropriate balance between providing the Access Provider sufficient time to enable adequate consideration of Applications and to ensure that the tasks are completed as efficiently as possible.

²⁶ Telecom, *Detailed Submission on Service Level Terms*, 23 May 2008, p 2-4.

²⁷ NZ Communications, *Submission to the Commerce Commission in relation to the STP for the Co-location on Cellular Mobile Transmission Sites Service*, 24 May 2008, p 15.

118. The Commission invites submissions on the time periods set out in Appendix 1 of the Service Level Terms.

Service level capacity limits

119. Telecom submitted that the monthly capacity limit suggested by Vodafone should be removed from the Operations Manual and replaced with a capacity limit in the Service Level Terms, where the Access Provider would only be required to issue up to a maximum of 10 Data Site Packs over 5 working days per Access Seeker.²⁸
120. The Commission's view is that Vodafone's monthly capacity limit set out in clause 9.3.2 of the Operations Manual be replaced with a Service Level limit in Appendix 1 of the Service Level Terms, for issuing Site Data Packs. The Commission has inserted an exclusion in Item 7 of Appendix 1 of the Service Level Terms, to the effect that the Service Levels for issuing of Site Data Packs will only apply to 15 applications every 5 working days. The Commission notes that under a Service Level capacity limit of 15 applications per week, there is the potential for a monthly throughput of 60 applications per Access Provider.
121. Telecom also proposed that a capacity limit should be in place for the Service Level for Final Site Applications.²⁹ The Commission's view is that the Service Level capacity limit for issuing Site Data Packs should provide sufficient control of the rate of co-location applications, in association with the under-forecasting provisions set out in the draft Operations Manual.

122. The Commission invites submissions on the Service Level capacity limits in the Service Levels in Appendix 1 of the Service Level Terms provided in the draft STD.

Service level tolerances

123. NZ Communications submitted that the tolerance levels in Appendices 1 and 2 of Vodafone's Service Level Terms should be increased to 98% for each of the Service Levels, except for Fault Management, which should be 95%.³⁰
124. Telecom proposed that the tolerance levels for Access Provider acknowledgement of the receipt of Access Seeker documents should be 90% rather than 99% (as in previous STDs) due to higher complexity of data in Mobile Co-location Applications.³¹
125. The Commission's view is that the tolerance levels in the Mobile Co-location STD should be similar to those in the UCLL Co-location STD, including Item 11 (Meet notified expected restoration time) which has been changed from 80% in Vodafone's STP to 90% in the draft STD. The Commission considers that tolerance levels of 99% are appropriate for acknowledgment Service Levels,

²⁸ Telecom, *Detailed Submission on Service Level Terms*, p 2-3.

²⁹ *ibid*, p 3.

³⁰ NZ Communications, *Submission to the Commerce Commission in relation to the STP for the Co-location on Cellular Mobile Transmission Sites Service*, 24 May 2008, p 15.

³¹ Telecom, *Detailed Submission on Service Level Terms*, 23 May 2008, p 2.

given that Access Providers are simply required to provide notification that they have received the Access Seeker's Application.

Performance penalties for individual service level defaults

126. NZ Communications has submitted that no incentive to perform will arise from a monthly 7% deduction in the standard charge for Service Levels as set out in Appendix 2 of Vodafone's Mobile Co-location Service Level Terms, and that the penalty should be a 100% deduction.³² NZ Communications also proposed that every Service Level included in Appendix 1 of the Service Level Terms should be subject to penalties for non-compliance.³³
127. Telecom submitted that financial penalties were inappropriate for the failing to meet the Service Levels for Final Site Approval and Approval to Build, on the grounds that these tasks were largely controlled by the Access Seeker.³⁴
128. The Commission has added penalties for failing to meet the notified fault restoration time, and completing the Interference Desktop Study, as proposed by Telecom.³⁵ Furthermore, the Commission's view is that penalties should be retained for Final Site Approval and Approval to Build, on the basis that Access Providers should have sufficient warning of resource requirements from progress with preceding tasks associated with the specific Relevant Facilities.
129. The Commission considers the monthly penalty rate of 100% (as proposed by NZ Communications) would be unduly onerous on Access Providers. The Commission's view, where specific charges are payable to the Access Provider for delivery of services associated with processing co-location Applications, a penalty of 20% of the service charge should provide sufficient incentive for the Access Provider to comply with specific individual Service Levels, especially when coupled with delay day penalties outlined below. For those Service Levels for which no financial penalties are proposed, the Commission considers that there may be sufficient incentive to comply through the Service Level Default reporting requirements, and the transparency this provides of Access Provider performance.
130. The Commission seeks submissions on the penalty rate of 20% of the service charge.

Performance penalties for cumulative delay days

131. The Commission considers that differences between mobile and fixed-line telecommunications warrant amendments to the penalty regime which was developed for the UCLL Co-location STD. For example, the importance of condensed roll out periods for mobile networks places greater emphasis on incentives for compliance with the timeframes set out in Service Level Terms. Additionally, in its submission, NZ Communications states that it considers mobile telephony to be more profitable to network operators than land-line and

³² NZ Communications, *Submission to the Commerce Commission in relation to the STP for the Co-location on Cellular Mobile Transmission Sites Service*, 24 May 2008, p 15.

³³ *ibid.*

³⁴ Telecom, *Detailed Submission on Service Level Terms*, 23 May 2008, p 4.

³⁵ *ibid.*

broadband, and penalties should reflect the economic impact of co-location failures.³⁶

132. NZ Communications also proposed setting Access Provider penalties for not reaching targets for the number of co-locations to be achieved in a specified time period.³⁷
133. However, the Commission's view is that Access Providers are not the sole parties responsible for all tasks associated with developing and approving co-location Applications. The Commission considers that Access Providers should only be accountable for the tasks over which they have responsibility.
134. The approach proposed by the Commission in the draft STD is to include an additional overarching penalty for the cumulative delay days an Access Provider accrues whilst providing key deliverables outlined in the Service Level Terms.
135. Delay days are defined as the number of working days that an Access Provider has taken to complete a key task, over and above the number of working days provided for delivery in the Service Levels. The delay days are cumulative across the list of tasks outlined in section 8 of the draft Service Level Terms, including taking into account any days credited by completion of tasks earlier than required.
136. The delay day penalty rate is \$500 per Application per day. The primary objective is to set a penalty that is sufficient to incentivise delivery of key tasks according to the time periods set out in the Service Level Terms. The Commission's approach is not to include a tolerance level for delay day penalties on the grounds the Access Provider could claw-back delay days in the provision of subsequent Service Levels.
137. The Commission's view is that that delay days should be accumulated only where an Access Provider exceeds the timeframe for a deliverable that it is responsible for under the Service Level Terms. There Commission notes that timeframes have also been included in the Operations Manual for tasks that Access Seekers are responsible for during the provisioning process. As noted in paragraph 205 below, where an Access Seeker materially exceeds such timeframes, the relevant Application will lapse, and the Access Seeker will be removed from the queue.
138. A key benefit of the delay day penalties is that Access Provider would be incentivised to claw back any delay for a deliverable by meeting the Service Levels for subsequent deliverables before the required time periods.
139. The Commission seeks submissions on the inclusion of delay day penalties as a central component of the penalty regime for the Mobile Co-location STD, and the use of a penalty rate of \$500 per site per day to expedite service delivery.

Service level reporting

140. Telecom submitted that the "name and shame" regime in clauses 6.2 and 7.2 of the UCLL Co-location STD can provide greater incentives to meet the Service

³⁶ NZ Communications, *Submission to the Commerce Commission in relation to the STP for the Co-location on Cellular Mobile Transmission Sites Service*, 24 May 2008, p 4.

³⁷ *ibid*, p 14-15.

Levels than financial penalties.³⁸ Telecom's proposal is that the Mobile Co-location Service Level Terms should require monthly Service Level and Service Level Default reports to be publicly available on the Access Provider's website.

141. The Commission has included Telecom's proposal in clauses 6.2 and 7.2 of the Mobile Co-location Service Level Terms, on the basis that making the Service Level and Service Level Default reports publicly available would further incentivise Access Providers to meet Service Levels.

³⁸ Telecom, *Detailed Submission on Service Level Terms*, 23 May 2008, p 1-2.

OPERATIONS MANUAL

142. The Mobile Co-location Operations Manual sets out the operational procedures for supply of the Mobile Co-location Service. The following diagram provides a high-level summary of the process set out in the Operations Manual, and its relationship with the Interference Management and Design document:

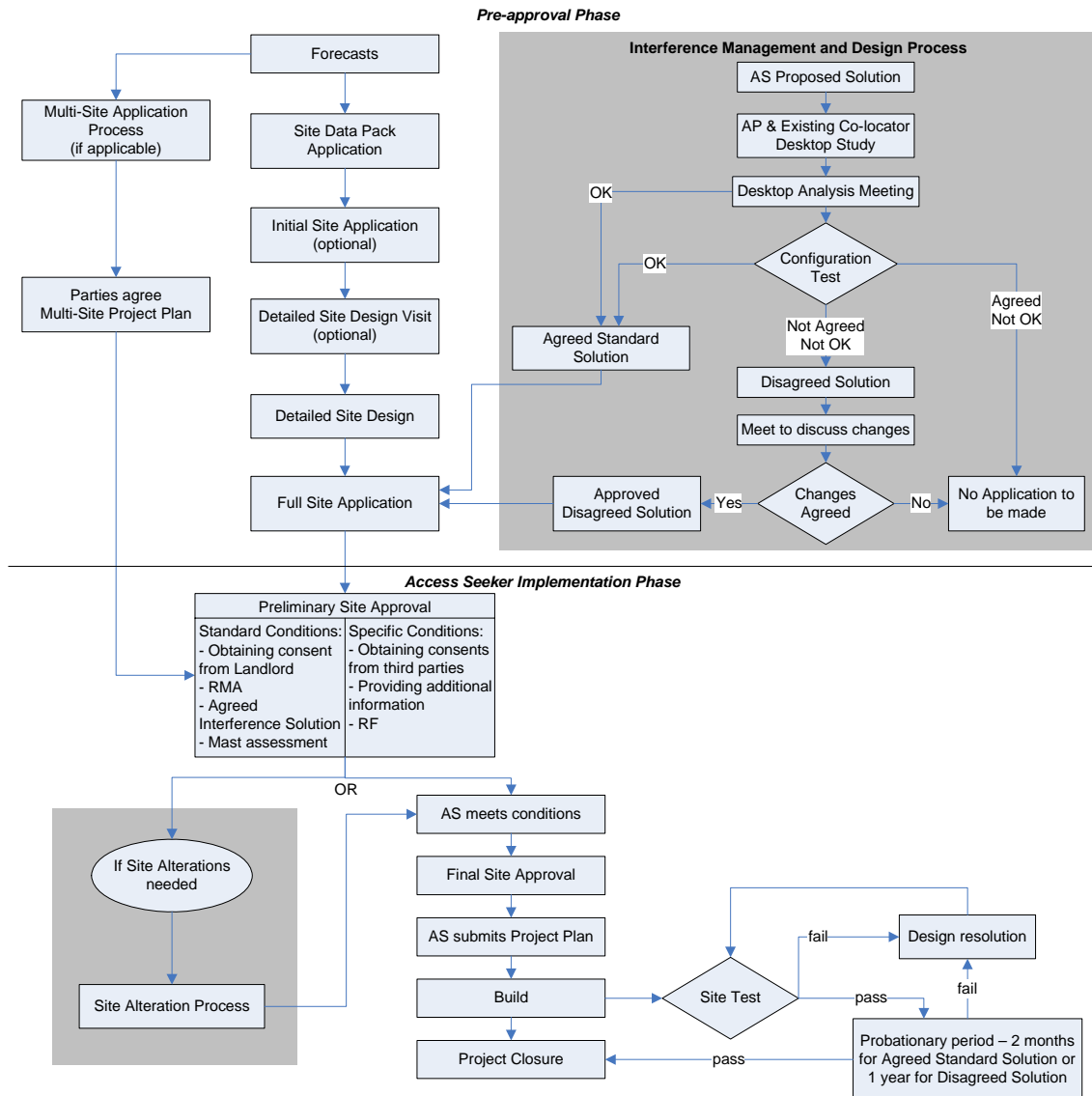


Figure 2: Operations Manual Process Diagram

143. More detailed process diagrams, along with the applicable timeframes, are included in Appendix C of this document.

Common format site database

144. Vodafone proposed the use of a Common Format Site Database to inform the Access Seeker as to which sites should be feasible for co-location so that the Access Seeker will be able to use the data on a multi-site basis to decide which sites it wishes to make an Application for.

145. The Commission is of the view that a Common Format Site Database is vital to the successful operation of the Mobile Co-location Service. The Commission considers that the ability for an Access Seeker to have visibility regarding an Access Provider's Relevant Facilities will enable an Access Seeker to identify those sites which are most suited to its needs.

Relevant Facilities to be included in the Common Format Site Database

146. Vodafone proposed that an Access Provider's Common Format Site Database will contain information only on those Relevant Facilities that are reasonably and/or practicably capable of supporting the Mobile Co-location Service.³⁹
147. The Commission's view is that the Common Format Site Database should contain information on all of an Access Provider's Relevant Facilities. The Commission considers that the decision as to whether a site is "reasonably and/or practicably capable of supporting the Mobile Co-location Service" is subjective and, therefore, should not be left solely to the Access Provider. In the interests of transparency, the Commission considers an Access Provider should not have the ability to omit Relevant Facilities from its Common Format Site Database.

Accuracy of information

148. Telecom submitted that the only accurate information the Access Seeker can rely on at a specific point in time is that contained in the Site Data Pack. Therefore, Telecom proposed that clause 27.2.2 of Vodafone's Operations Manual should be amended to reflect that the information in the Common Format Site Database is indicative only, and is not binding on either party.⁴⁰
149. The Commission's view is that the information in the Common Format Site Database is essential in enabling Access Seekers to place Applications for Relevant Facilities. Therefore, the Commission considers that Access Providers should be required to use their best endeavours to ensure that the information contained in the Common Format Site Database is as accurate as possible.

150. The Commission invites submissions on possible penalties or incentives to ensure the provision of accurate information in an Access Provider's Common Format Site Database.

Standard site types

151. In its STP, Vodafone did not strictly identify a specific set of standard site types. Vodafone stated that doing so would have been impracticable for the purposes of the STP, as an STD must specify the non-price terms and conditions upon which all Access Providers will provide the Mobile Co-location Service to Access Seekers. Rather, Vodafone proposed a procedure for the identification of standard or substantially similar site types within a given Access Provider's network.⁴¹

³⁹ Vodafone, *Standard Terms Proposal for Mobile Co-location*, 28 April 2008, Operations Manual clause 27.1.1.

⁴⁰ Telecom, *Submission on Vodafone Mobile Co-location STP: Detailed submission on the Operations Manual*, 23 May 2008, p 26.

⁴¹ Vodafone, *Standard Terms Proposal for Mobile Co-location*, 28 April 2008, p 24, para 58.

152. Telecom submitted that although they would ideally like to be able to treat multiple Applications in the same way for efficiency and costs reasons, this could only occur if there was a degree of commonality which meant that Applications did not have to be dealt with on a site-by-site basis. Furthermore, Telecom believes that given the large number of variable characteristics of cell sites, the likelihood of identifying a large number of sites with exactly the same characteristics is relatively low.⁴²
153. NZ Communications submitted that use of standard site types will help bulk engineering protocols to be agreed, and will speed up rapid multi access. In addition, NZ Communications believes that there are already a group of site types which can be considered to be standard site types and these should be attached to the STD as an appendix.⁴³
154. Given that are multiple Access Providers of the Mobile Co-location Service, each of whom have a number of common site types (which may change over time), the Commission agrees with Vodafone that it would be impracticable to specify certain standard site types in the STD.

Site alterations

155. As noted in paragraph 35 above, the Commission's view is that, if necessary in order to achieve a position on the Mast that will give the Access Seeker the level of coverage that it requires, the Access Seeker can require any or all of the following solutions to be employed (at the Access Seeker's cost and subject to the conditions around Unacceptable Performance Degradation):
 - rearrangement of the Access Provider's existing Antenna;
 - the use of Antenna Minimisation technology;
 - Mast replacement, extension or revision.
156. Accordingly, the Commission has included a process for Antenna rearrangement and Antenna Minimisation in the draft STD that is based on the process for Mast extension, revision, or replacement.

Greenfields co-location

157. Vodafone included a voluntary greenfields co-location process in its STP, reflecting its view that the Mobile Co-location Service extends to existing Relevant Facilities only, and not those that may be used at some future date.⁴⁴
158. As discussed in the Service Description section above, the Commission's view is that greenfields sites fall within the definition of the Mobile Co-location Service. The Commission has amended the greenfields process set out in the Operations Manual to reflect that the process is compulsory.
159. The Commission considers that where an Access Provider intends to establish a new site that is likely to be reasonably and/or practicably capable of supporting the Mobile Co-location Service, that Access Provider must use its best

⁴² Telecom, *Submission on Vodafone Mobile Co-location STP: Main Submission*, 23 May 2008, p 25.

⁴³ NZ Communications, *Submission to the Commerce Commission in relation to the STP for the Co-location on Cellular Mobile Transmission Sites Service*, 24 May 2008, p 26.

⁴⁴ Vodafone, *Standard Terms Proposal for Mobile Co-location*, 28 April 2008, p 40, para 115.

endeavours to inform all other Access Seekers, inviting them to participate in the greenfields process.

160. The Commission invites submissions on the merits of incorporating a compulsory greenfields co-location process in the Mobile Co-location STD.

Provisioning and mobile co-location tasks

161. Vodafone proposed a five stage end-to-end process for provision of the Mobile Co-location Service. Vodafone's provisioning process included the following steps:
- Stage 1: Site desktop assessment;
 - Stage 2: Detailed site design;
 - Stage 3: Landlord and third party approvals, RMA consents, and final site approval;
 - Stage 4: Project plan; and
 - Stage 5: Mobile Co-location implementation.
162. In its submission on Vodafone's STP, NZ Communications expressed concern that the provisioning process is overly complex, and that greater simplicity is required.⁴⁵ Telecom expressed a similar view, suggesting that certain processes set out in the Operations Manual could be streamlined. The Commission agrees, and has made a number of amendments to the provisioning process. These amendments are discussed below.

Site desktop assessment – Initial site application

163. Telecom submitted that there may be situations where both parties are satisfied with the situation in the site design notes and will be prepared to proceed directly to a Full Site Application on the basis of these notes.⁴⁶
164. The Commission considers that it would be inefficient for the Access Provider and Access Seeker to spend time and resources processing an Initial Site Application in the situation where both parties are happy to proceed directly to a Full Site Application. The Commission agrees with Telecom that the Initial Site Application process and detailed site design visit should be optional.

Site Agreement

165. Clause 17.5 of Vodafone's Operations Manual requires the Access Provider and the Access Seeker to execute an agreement for the terms and special conditions relating to the provision of the Mobile Co-location Service at the Relevant Facilities.
166. Section 300 of the Act requires the Mobile Co-location STD to specify sufficient terms to allow, without the need for the access seeker to enter into further agreement with the access provider, the service to be made available.

⁴⁵ NZ Communications, *Submission to the Commerce Commission in relation to the STP for the Co-location on Cellular Mobile Transmission Sites Service*, 24 May 2008, p 23.

⁴⁶ Telecom, *Submission on Vodafone Mobile Co-location STP: Main Submission*, 23 May 2008, p 31, para 8.26.

167. The Commission considers that the Operations Manual contains sufficient terms for the service to be made available without the need for a site agreement. Therefore, the Commission's view is that the requirement for the Access Seeker and Access Provider to enter into a site agreement is inappropriate. Accordingly, clause 17.5 has been removed in the draft STD.

Multi Site Applications

168. Telecom proposed a process that will enable parties to make "multi site applications" which will be dealt with on a "project" basis. Under Telecom's proposal, a Multi-Site Application can be made regardless of whether there are similarities between the sites, and the only pre-requisite is that 10 or more individual site applications are made at one time.⁴⁷ The purpose of the Multi-Site Application process is to allow Access Seekers to obtain approval for multiple sites in a rapid timeframe.
169. The process for a Multi-Site Application, as proposed by Telecom, is as follows:⁴⁸
- (a) The Access Seeker will use the Common Format Site Database to research the site types, the region, or other reason for batching such as a contiguous route down SH1;
 - (b) Where the Access Seeker has identified a group of 10 or more sites that it wishes to apply for at once, it will bundle them together either:
 - (i) for a region (not necessarily by territorial authority, but for example Tauranga); or
 - (ii) for a type of site as identified by the Access Provider in the Common Format Site Database; or
 - (iii) for a specific group identified by the Access Seeker (for example Auckland Airport);
 - (c) The Access Seeker will forecast the number of Multi-Site Applications, including the number of sites in each Multi-Site Application;
 - (d) The Access Seeker will then submit a Multi-Site Application aligned with its forecast in a form agreed by the parties, containing the site address and preapproved solutions;
 - (e) The Access Provider will acknowledge receipt of the Multi-Site Application;
 - (f) The Access Provider will process the Multi-Site Application within either:
 - (i) 5 Working Days for 10 sites;
 - (ii) 10 Working Days for 20 sites; or
 - (iii) The parties will agree a timeframe for any Multi-Site Application containing over 20 sites.
 - (g) Once the Access Provider has processed the Multi-Site Application it will arrange a meeting with the Access Seeker;
 - (h) The Access Provider will bring to the meeting the Multi-Site Application project proposal which should contain:
 - (i) The name and contact details of the relevant project manager of the Access Provider,
 - (ii) The proposed timeframes for the Access Seeker's submission of full application documents for the sites; and

⁴⁷ Telecom, *Submission on Vodafone Mobile Co-location STP: Main Submission*, 23 May 2008, p 25, para 8.8.

⁴⁸ *ibid*, para 8.9.

- (iii) The proposed service levels which will apply.
 - (i) The parties will discuss relevant charges during the meeting.
 - (j) Following the meeting, the parties will have 10 working days to agree the project plan, including service levels and charges for the Multi-Site Application Project.
 - (k) Where the parties fail to reach agreement:
 - (i) Either party can initiate the dispute resolution procedures; or
 - (ii) The Access Seeker can re-submit the applications under the standard process set out in the STD.
- 170. The Commission's view is that the inclusion of a Multi-Site Application process in the Operations Manual is appropriate. The Commission considers that Multi-Site Applications will promote efficiencies for both Access Seekers and Access Providers, and will help facilitate rapid roll out of a cellular mobile telephone networks.
- 171. Accordingly, the Commission has included a Multi-Site Application process based on that proposed by Telecom.
- 172. The Commission invites submissions on possible amendments to the Multi-Site Application process to ensure that it is suitable for the rapid roll out of a mobile network.

Access Provider forecasting

- 173. Telecom submitted that the terms relating to "Access Provider Forecasting" in section 9 from the Interference Management and Design document would better fit in the Operations Manual.⁴⁹ The Commission agrees and "Access Provider Forecasting" is now located in section 9 of the Mobile Co-location Operations Manual.

Forecast Horizon

- 174. One of the limits on access principles for the Mobile Co-location Service is "the access provider's current and reasonable forecast requirements for capacity on the relevant facilities".⁵⁰
- 175. In its STP, Vodafone expressed a view that it is quite reasonable for a network operator to have network deployment plans in place for a number of years before actually installing all equipment. Accordingly, Vodafone included provisions to allow an Access Provider of the Mobile Co-location Service to cater for its current and reasonable forecast requirements for capacity on the Relevant Facilities for a maximum period of five years.⁵¹
- 176. Telecom agreed with Vodafone's assertion that five years is a reasonable period. Telecom noted that given that there is a five year "use it or lose it" provision associated with spectrum management rights, Access Providers should have five years to deploy new technologies. In addition, Telecom submitted that the Commission must give adequate consideration to the risk that regulation might

⁴⁹ Telecom, *Submission on Vodafone Mobile Co-location STP: Detailed submission on the Operations Manual*, 23 May 2008, p 6.

⁵⁰ Telecommunications Act 2001, Schedule 1, Part 3.

⁵¹ Vodafone, *Standard Terms Proposal for Mobile Co-location*, 28 April 2008, p 58, para 167.

undermine the deployment of future technology necessary to transform New Zealand's economy.⁵²

177. NZ Communications expressed a contrary view in its submission, suggesting that Access Provider should only be able to reserve infrastructure for an actually available or well-defined technology period of no more than 18 months.⁵³ Similarly, TUANZ submitted that the forecast horizon should be limited to two years.
178. TUANZ noted that the product cycle in telecommunications systems is quite rapid and it is almost axiomatic that ageing equipment is replaced with new equipment that requires less power, less space, and less environmental protection than the previous generation. Accordingly, TUANZ submitted that there is no case for a presumption that the Access Provider's five-year-out needs will require the same facilities that an Access Seeker is likely to require for immediate market entry.⁵⁴
179. The Commission notes that the limit on access principles states "...current and reasonable forecast requirements for capacity...". In the Commission's view, for a forecast to be reasonable, it must be based on a sufficient level of specificity. The Commission considers that a five year forecast horizon would create uncertainty around new and developing technologies, and encourage Access Providers to place speculative forecasts for capacity.
180. The Commission considers that a forecast horizon of two years strikes an appropriate balance between allowing Access Providers the ability to reasonably reserve space for their future deployment plans, and the benefit to End Users that will result from allowing a new entrant to co-locate where feasible.

Access Provider Forecasting in the Common Format Site Database

181. Vodafone's STP required Access Providers to populate and update the Common Format Site Database on a monthly basis, except for the Access Provider's current and reasonable forecast requirements for capacity, which were required to be updated on a quarterly basis.⁵⁵
182. NZ Communications submitted that there is no reason why the Access Provider's current and reasonable forecast requirements should not also be updated on a monthly basis, as this will be key information that an Access Seeker requires in order to plan its network roll out.⁵⁶
183. The Commission agrees with NZ Communication's submission, and has amended the relevant clause to require all information contained in the Access Provider's Common Format Site Database to be updated on a monthly basis (by including new information and removing information that is no longer current).

⁵² Telecom, *Submission on Vodafone Mobile Co-location STP: Main Submission*, 23 May 2008, p 30, para 8.24.

⁵³ NZ Communications, *Submission to the Commerce Commission in relation to the STP for the Co-location on Cellular Mobile Transmission Sites Service*, 24 May 2008, p 38.

⁵⁴ TUANZ, *Consultation on Vodafone's Standard Terms Proposal for Mobile Co-location*, p 4.

⁵⁵ Vodafone, *Standard Terms Proposal for Mobile Co-location – Schedule 3: Operations Manual*, 28 April 2008, clause 27.2.1.

⁵⁶ NZ Communications, *Submission to the Commerce Commission in relation to the STP for the Co-location on Cellular Mobile Transmission Sites Service*, 24 May 2008, p 25.

Inaccurate Access Provider Forecasting

184. NZ Communications submitted that the “use it or lose it” concept set out as part of the queuing policy should also apply to the Access Provider’s current and reasonable forecasts for capacity. NZ Communications proposed that in the event that the Access Provider does not use the Relevant Facility for the purposes of its reasonable forecast requirements for capacity within 18 months, that forecast will lapse and be removed from the queue.⁵⁷
185. The Commission agrees with NZ Communications and has amended the relevant clauses of the queuing policy. However, the Commission notes that, in accordance with paragraph 180, the Commission has determined that an Access Provider forecast horizon of two years (rather than 18 months) is appropriate.

Use of Access Provider Forecasts for anti-competitive purposes

186. As outlined in paragraph 204 below, the Access Seeker is not placed in the queue until a Full Site Application is made. Consequently, the Commission notes that there is the potential for an Access Provider to forecast additional or new current and reasonable forecast requirements for capacity in an attempt to restrict access to its Relevant Facilities (prior to the Access Seeker reaching the Full site Application stage).
187. The Commission’s view is that, where an Access Seeker submits a Site Data Pack Application in relation to a Relevant Facility, the Access Provider should not be allowed to forecast additional or new current and reasonable forecast requirements for capacity on that Relevant Facility for a period of 40 working days.
188. The Commission considers that, in most cases, this 40 working day period will allow an Access Seeker sufficient time to submit a Full Site Application (and be placed in the queue). In addition, if the Access Provider accumulates delay days (in accordance with the Service Level Terms) in relation to the relevant application (prior to the Full Site Application being submitted), these delay days will be added on to the 40 working day period outlined in paragraph 187.

Access Seeker forecasting

Separate Forecasts

189. Clause 8.1.5 of Vodafone’s STP required Access Seekers to forecast their demand for Site Data Pack Applications.
190. Telecom submitted that Access Seekers should also be required to include forecasts for Interference Desktop Studies, Multi-Site Application projects, Initial Site Applications and Full Site Applications, by region.⁵⁸ Telecom noted that these are all distinct steps in the process, use distinct resources which are not reliant on each other, and should therefore have separate forecasting requirements.⁵⁹

⁵⁷ NZ Communications, *Submission to the Commerce Commission in relation to the STP for the Co-location on Cellular Mobile Transmission Sites Service*, 24 May 2008, p 19.

⁵⁸ Telecom, *Submission on Vodafone Mobile Co-location STP: Detailed submission on the Operations Manual*, 23 May 2008, p 5

⁵⁹ *ibid.*

191. The Commission agrees, and has amended the relevant clause to require Access Seekers to forecast their expected volume of Site Data Pack Applications, Interference Desktop Studies, Multi-Site Application projects, Initial Site Applications and Full Site Applications.

Inaccurate forecasting

192. In its submission, Telecom noted that Vodafone's STP did not include a mechanism for dealing with inaccurate Access Seeker forecasting.⁶⁰ Telecom proposed the inclusion of an overforecast/underforecast regime that is consistent with the previous STDs released by the Commission.
193. The Commission acknowledges the importance of accurate Access Seeker forecasting in ensuring efficient and effective provision of the Mobile Co-location Service. Access Seeker forecasting is intended to enable Access Providers to allocate resources in advance of actual Applications being made.
194. A mechanism for ensuring that Access Seeker forecasts are reliable is essential for successful delivery of the Mobile Co-location service. The Commission has included an overforecast/underforecast regime similar to that proposed by Telecom.

Capacity limit

195. Clause 9.3 of Vodafone's proposed Operations Manual set out a capacity limit requiring each Access Provider to process Site Data Pack Applications up to a maximum (inclusive) cumulative total of 30 Site Data Pack Applications per month.⁶¹
196. NZ Communications submitted that the capacity limit proposed by Vodafone is too low, particularly in situations where new networks are being rolled out.⁶² Similarly, Kordia expressed concerns around the capacity limit, stating that the figure of 30 is too low to enable the benefits of co-location to be realised.⁶³
197. Telecom submitted that, where forecasting is accurate, capacity limits should not apply.⁶⁴
198. In line with the submissions from NZ Communications and Kordia the Commission considers that a capacity limit will inhibit the rapid roll out of new network equipment, and therefore, would be contrary to the long-term benefit of End Users in New Zealand.
199. The Commission agrees with Telecom's submission that accurate Access Seeker forecasting will eliminate the need for a capacity limit. As outlined in paragraph 194, the Commission has adopted an overforecast/underforecast regime that is consistent with previous STDs.

⁶⁰ Telecom, *Submission on Vodafone Mobile Co-location STP: Detailed submission on the Operations Manual*, 23 May 2008, p 6.

⁶¹ Vodafone, *Standard Terms Proposal for Mobile Co-location – Schedule 3: Operations Manual*, 28 April 2008, clause 9.3.

⁶² NZ Communications, *Submission to the Commerce Commission in relation to the STP for the Co-location on Cellular Mobile Transmission Sites Service*, 24 May 2008, p 18.

⁶³ Kordia, *Consultation on Vodafone's Standard Terms Proposal for Mobile Co-location*, 26 May 2008, p 14, para 15.1.

⁶⁴ Telecom, *Submission on Vodafone Mobile Co-location STP: Detailed submission on the Operations Manual*, 23 May 2008, p 7.

200. The Commission considers that these forecasting penalties will encourage Access Seekers to ensure that they forecast accurately, and therefore, an absolute capacity limit is no longer necessary. However, as discussed in the Service Level Terms section above, the Commission notes that Access Providers may face difficulties in meeting the Service Levels where a large volume of Applications are received at once. This issue has been dealt with in the Service Level Terms through the inclusion of a Service Level capacity limit for the issuing of Site Data Packs.

Queuing policy

201. Vodafone's STP included a queuing policy in order to manage demand from Access Seekers for Relevant Facilities. In accordance with the principles agreed by the TCF, the queuing policy proposed by Vodafone included the concepts of "first come first served" and "use it or lose it".⁶⁵

First come first served

202. Vodafone proposed that an Access Seeker should be placed in the queue at the initial application stage.⁶⁶
203. Telecom submitted that, in accordance with the TCF recommendations, an Access Seeker should be placed in the queue only once it has made a Full Site Application. Telecom considers that it is inappropriate that a party that is not committed to complete a mobile co-location should be able to stand in the way of another Access Seeker who may be ready, willing and able to co-locate.⁶⁷
204. The Commission agrees with Telecom's suggestion that the approach taken in Vodafone's STP could encourage Access Seekers to make applications at a time when they are not fully committed to co-locate in a particular site (in order to block other Access Seekers). The Commission considers that an Access Seeker should be placed in the queue when it makes a Full Site Application.

Use it or lose it

205. The Commission notes that, in accordance of clause 11.3.4 of the Operations Manual, where an Access Seeker materially exceeds one or more of the timeframes relating to tasks for which it is responsible, the Access Seeker's relevant Application will lapse and the Access Seeker will be removed from the queue.
206. The Commission considers that this is an appropriate penalty for an Access Seeker failing to progress its applications in a timely manner.

Access Provider requirements

207. Under clause 10.5.1 of the Operations Manual in Vodafone's STP, the queuing policy would not apply to the Access Provider's current and reasonable forecast requirements for capacity on the Relevant Facilities.
208. NZ Communications submitted that queuing policy must also apply to the Access Provider's current and reasonable forecast requirements.

⁶⁵ Vodafone, *Standard Terms Proposal for Mobile Co-location*, 28 April 2008, p 38, para 108.

⁶⁶ *ibid*, para 109.

⁶⁷ Telecom, *Submission on Vodafone Mobile Co-location STP: Main Submission*, 23 May 2008, p 29, para 8.18.

209. The Commission agrees and considers that it is inappropriate for an Access Provider to be able to jump any Access Seekers in the queue when forecasting additional or new reasonable forecast requirements for capacity. The relevant clauses of the Operations Manual have been amended accordingly.

Other Operations Manual issues

Charges

210. Telecom submitted that given that Mobile Co-location is a specified service, any provision that restricts charges in any way should be removed. Telecom submitted that any list of chargeable items, such as that set out in Appendix S, should be provided to the Access Seeker by the Access Provider under commercially negotiated terms in the form of a price book. Accordingly, Telecom submitted that Appendix S should be removed from the STD.⁶⁸
211. The Commission agrees with Telecom's submission, and considers that because the Mobile Co-location is a specified service; any provision that limits the scope for agreement on the price payable should be removed from the STD.

People and contact details

212. Under clause 2.2 of the Operations Manual, Vodafone proposed that the Access Provider and Access Seeker provide contact details for two people:
- their Mobile Co-location service manager; and
 - their Mobile Co-location project manager.
213. Vodafone proposed that the service manager is responsible for the overall relationship between the parties with respect to the Mobile Co-location Service, and that this persons responsibilities include, but are not limited to:
- provisioning;
 - progress reporting and tracking;
 - billing;
 - forecasting; and
 - updating databases (including the Common Format Site Database).
214. Vodafone proposed that the project manager is the person who will liaise with the other party in relation to the implementation and supply of the Mobile Co-location Service at the particular Relevant Facilities.
215. Telecom submitted that requiring only two contacts for all of the different aspects of the service is insufficient, and that different service providers will have different organisational structures with different people responsible for various parts of the STD. Furthermore, Telecom submitted that clause 2.2 should either be expanded to include a detailed list of contacts for different functions, or amended to give an indicative list of functions and contacts that will be required.⁶⁹

⁶⁸ Telecom, *Submission on Vodafone Mobile Co-location STP: Detailed submission on the Operations Manual*, 23 May 2008, p 26.

⁶⁹ *ibid*, p 2.

216. NZ Communications, on the other hand, submitted that the Access Provider should have a dedicated co-location manager and point of contact, who has delegated authority to deliver the service and make day-to-day operating decisions.⁷⁰ NZ Communications submitted that this Mobile Co-location Service Manager must be the single point of contact.⁷¹
217. The Commission notes that, as proposed by Vodafone, the Mobile Co-location Service Manager is responsible for the overall relationship between the parties. The Commission considers that the Service Manager will have the appropriate level of responsibility to address NZ Communications' concerns.
218. The Commission notes that in certain circumstances, it may be beneficial for the Access Provider and/or Access Seeker to provide a list of further contact details. The Commission has added a new clause 2.1.2 to allow for this possibility (if agreed to by both parties).

Utility Services

219. NZ Communications submitted that it should not be at the discretion of the Access Provider which utility services are made available for the Mobile Co-location Service. NZ Communications considers that the Access Seeker should be able to choose which utility services it requires and the Access Provider must then, acting reasonably, determine whether they are available.⁷²
220. The Commission notes that utility services are included as part as the description of service in the Act, and therefore, considers that it is inappropriate for the decision as to which utility services will form part of the utility services for the Mobile Co-location Service to be at the sole discretion of the Access Provider. The Commission has amended clause 34.2.1 accordingly.

Timeframes

221. Telecom submitted that it prefers that timeframes are referenced in the Operations Manual as well as being provided in the Service Level Terms and the Implementation Plan. Telecom included the relevant timeframes in its mark up of the Operations Manual.⁷³
222. Similarly, on a number of occasions in its submission, NZ Communications proposed that timeframes should be included in the Operations Manual.
223. The Commission agrees with these submissions and, where possible, has included the relevant timeframes in the Operations Manual.

⁷⁰ NZ Communications, *Submission to the Commerce Commission in relation to the STP for the Co-location on Cellular Mobile Transmission Sites Service: Appendix 1 - RMAP*, 24 May 2008, p 2.

⁷¹ NZ Communications, *Submission to the Commerce Commission in relation to the STP for the Co-location on Cellular Mobile Transmission Sites Service*, 24 May 2008, p 16.

⁷² *ibid*, p 26.

⁷³ Telecom, *Submission on Vodafone Mobile Co-location STP: Detailed submission on the Operations Manual*, 23 May 2008, p 1.

ACCESS TERMS

Greater reciprocity of access obligations between Access Providers and Access Seekers

224. NZ Communications proposed a number of changes to the Access Terms emphasising that many of the provisions in this Schedule should relate to the Access Provider as well as the Access Seeker, such as the requirement to remove all rubbish from Relevant Facilities resulting from the Access Provider's use.⁷⁴
225. The Commission's view is that some of the points of reciprocity raised by NZ Communications should be included in the STD, such as those obligations outlined in section 7 of the draft Access Terms relating to health and safety, compliance with relevant legislation (such as the Resource Management Act 1991), and co-operation with reasonable requests made by Access Seekers.

Transfer of sections on mast revision, extension and replacement to the Operations Manual

226. Telecom proposed that the sections 10 and 11 in relation to the revision, extension and replacement of Masts should be deleted from the Access Terms, and that amended versions be inserted into the Operations Manual.⁷⁵
227. The Commission agrees with Telecom's proposal on the basis that sections relating to the revision, extension and replacement of masts in the Access Terms do not primarily cover legal issues related to access.

Decommissioning

228. Telecom proposed amending Section 12 of Vodafone's STP so that Access Providers can enter into commercial agreements with an Access Seeker who is co-located on the site for sale of any or all of the Relevant Facilities.⁷⁶ Telecom's example was that Access Providers may want to transfer the site to an Access Seeker, but re-use the Mast elsewhere or be unable to reach agreement on terms for the sale of all Relevant Facilities.
229. The Commission agrees with Telecom's proposal on the grounds that the greater flexibility it provides for commercial agreements should enable a more efficient process for decommissioning of an Access Provider's interest in a site.

⁷⁴ NZ Communications, *Submission to the Commerce Commission in relation to the STP for the Co-location on Cellular Mobile Transmission Sites Service*, 24 May 2008, p 31-34.

⁷⁵ Telecom, *Detailed submission on the Access Terms*, 23 May 2008, p 2.

⁷⁶ *ibid*, p 3.

INTERFERENCE MANAGEMENT AND DESIGN

230. In its STP, Vodafone noted that co-location on or with Relevant Facilities can give rise to significant benefits to mobile network operators in terms of increasing the efficiency, and lowering the costs of providing cellular mobile services to End Users. However, Vodafone also claimed that although co-location may create potential for improve competition, it can also lead to degradation in the performance of existing mobile networks.⁷⁷
231. The Commission considers that the concept of unacceptable performance degradation will play an important role in ensuring successful provision of the Mobile Co-location Service. The Commission is of the view that an appropriate interference threshold will provide a mechanism for balancing the application of the access principles with the management of existing or potential radio spectrum interference arising from use of the Relevant Facilities.

Unacceptable performance degradation

Definition of Unacceptable Performance Degradation

232. Vodafone proposed that the definition of ‘unacceptable performance degradation’ needs to set careful limits to ensure that degradation is kept to a minimum. Accordingly, Vodafone proposed that:⁷⁸
- “Unacceptable Performance Degradation” in this Interference Management and Design document means any one or more of the following:
- (a) Isolation of less than 30 dB between the Antenna port of the Access Seeker’s transmitting equipment and the Antenna port of the Access Provider’s receiving equipment;
 - (b) a total level of loss from the Access Provider’s Link Budget of more than 0.5 dB in either the uplink budget or the downlink budget;
 - (c) Performance Degradation which affects the quality of Telecommunications Services in more than a minor way.
233. NZ Communications submitted that, with careful engineering, the degradative effects of co-locating radio systems can be made minimal in nature, and therefore, of no material disadvantage to the Access Provider. Furthermore, NZ Communications submitted that the issue is far more complex that is currently represented in Vodafone’s STP, and that different levels should be determined for rural, city and suburban sites.⁷⁹
234. In its submission, Kordia queried who will decide the criteria for what is “more than minor” if the definition of unacceptable performance degradation as proposed by Vodafone were to be adopted. Kordia asserted that an agreed definition of the threshold for harmful interference should include a quantified parameter for time varying interference, such as: an incremental 5% increase in outages. Kordia proposed that ‘outage’ should be defined as “the proportion of

⁷⁷ Vodafone, *Standard Terms Proposal for Mobile Co-location*, 28 April 2008, pp 45-49.

⁷⁸ *ibid*, *Schedule 5 - Interference Management And Design*, clause 6.2.1

⁷⁹ NZ Communications Limited, *Submissions to the Commerce Commission (New Zealand) in Relation to the Standard Terms Proposal for the Co-location on Cellular Mobile Transmission Sites Service*, 20 May 2008, p 37.

dropped calls due to interference, compared with the proportion of dropped calls in the absence of the interference”.⁸⁰

235. Furthermore, Kordia suggested that Vodafone’s proposal of 0.5dB loss in the link budget may be more conservative than industry practice for constant interference to mobile cellular systems. Kordia referenced an ITU-R report in order to support its view that a link budget reduction of 1.0dB is appropriate for co-located base stations.⁸¹
236. Kordia submitted that Unacceptable Performance Degradation should be defined as follows:⁸²
- (a) isolation of less than 30 dB between the Antenna port of the Access seeker’s transmitting equipment and the Antenna port of the Access Provider’s receiving equipment; and
 - (b) a total level of loss from Access Provider’s Link Budget of more than 1.0 dB in either the uplink budget or the downlink budget;
 - (c) an incremental 5% increase in outages in Telecommunications Services.
237. Telecom submitted that although 1.0dB is an appropriate limit for non-mobile and low speed services, it is not appropriate for mobile high speed services. Telecom noted that for voice and/or low speed data services, the impact of interference is to reduce the effective service area, so only End Users located at the edge of the coverage area are affected.⁸³
238. However, Telecom submitted that a reduction in the signal quality for modern high speed mobile broadband data services will impact on the speeds received by all End Users within a cell, not just those End Users operating at the cell edge.⁸⁴
239. The Commission agrees with Kordia that a link budget reduction of 1.0dB is an appropriate threshold for determining unacceptable performance degradation in relation to the Mobile Co-location Service. As noted in paragraphs 243 to 258 below, the Commission considers that the long-term benefit to End Users resulting from co-location is likely to outweigh any performance degradation to existing services (so long as such degradation occurs within the limits of unacceptable performance degradation).
240. The Commission’s view is that Vodafone’s proposed standard of affecting the quality of telecommunications services “in more than a minor way” is not quantifiable, and therefore not sufficiently certain to ensure an appropriate balance between the quality of service on one hand, and competition benefits to End Users on the other.
241. In addition, the Commission considers that additional provisions are required in order to minimise possible adverse impacts on public safety from potential degradation of the performance of emergency telecommunications services where competition benefits to End Users are not apparent.

⁸⁰ Kordia, *Consultation on Vodafone’s Standard Terms Proposal for Mobile Co-location*, 26 May 2008, p 28, para 4.1.

⁸¹ *ibid*, p 27.

⁸² *ibid*, para 6.3

⁸³ Telecom, *Submission on Vodafone Mobile Co-location STP: Main Submission*, 23 May 2008, p 37, para 10.15.

⁸⁴ *ibid*, p 38, para 10.16.

242. Accordingly, the Commission has defined “Unacceptable Performance Degradation” in clause 6.2 of the Interference Management and Design document to mean any one or more of the following:
- Isolation of less than 30dB between the Antenna port of the Access Seeker’s transmitting equipment and the Antenna port of the Access Provider’s receiving equipment or any Existing Co-locator’s transmitting or receiving equipment;
 - a total level of loss from the Access Provider’s or Existing Co-locator’s Link Budget of more than 1.0dB in either the uplink budget or the downlink budget;
 - a total level of loss of more than 0.2dB from either the uplink budget or the downlink budget of any Antenna solely dedicated to the provision of Emergency Services.
 - an incremental 5% increase in Outages in Telecommunications Services to End Users directly attributable to the incremental emissions of the Access Seeker from the Relevant Facility. Any increase in Outages is to be assessed:
 - i. prior to Stage 1 of the Project Closure Checklist under section 21 of the Mobile Co-location Operations Manual; and
 - ii. over a period with a reasonable number of calls and a mix of call types representative of the site’s traffic.

Long-term benefit to End Users

243. Vodafone highlighted the fact that, in making an STD, the Commission is required to consider the purpose set out in section 18 of the Act, to promote competition in telecommunications markets for the long-term benefit of End Users. Vodafone suggested that in order for co-location on cellular mobile transmission sites to meet the objectives of the Act, the Commission must balance two competing objectives:
- the possible pro-competitive and efficiency benefits that may result for End Users as a result of co-location on a given cellular transmission site; and
 - the likely detriment to End Users that will result from any performance degradation that such co-location may cause.⁸⁵
244. Furthermore, Vodafone submitted that although it can provide estimates of the potential detriment to End Users as a result of performance degradation, it is not aware of any estimates of the quantum of benefits consumers might be expected to experience as a result of co-location on a given Relevant Facility.⁸⁶
245. Kordia submitted that the issue is not about measuring the quantum of long-term benefit to End Users for each individual co-location site, but rather, co-location is a collectively beneficial arrangement for End Users as a group, and it is

⁸⁵ Vodafone, *Standard Terms Proposal for Mobile Co-location*, 28 April 2008, p 50, para 140.

⁸⁶ *ibid*, para 142.

inappropriate to require the need to establish a benefit at each and every potential co-location site.⁸⁷

246. The Commission acknowledges that co-location is likely to lead to some level of performance degradation to Access Providers services, and a resulting loss of network performance. However, as outlined above, the Commission believes that 1.0dB is an acceptable level of degradation resulting from supply of the Mobile Co-location Service. In reaching this conclusion, the Commission has considered that there are likely to be a number of efficiency trade-offs associated with Mobile Co-location.
247. Although there is likely to be a decrease in productive efficiency⁸⁸ as a result of the reduced performance of the Access Provider's network, and potentially the need for additional investment to fund infill sites, the Commission considers that there is likely to be an offsetting gain in productive efficiency as a result of socially wasteful or inefficient duplication of Relevant Facilities being avoided.
248. In addition to this offsetting productive efficiency gain from co-location, the Commission considers that there is likely to be a positive effect on efficient entry, leading to increased competition in the downstream market for retail mobile services.
249. The Commission notes that in the Australian mobile market, where there are four mobile network operators, co-location arrangements were entered into in August 2004 by Optus and Vodafone and Telstra and Hutchison '3', as a means to defray the overall costs associated with the 3G network build-out.⁸⁹ Further, by 2007, all network operators in Australia enabled their 3G networks with the High Speed Downlink Packet Access (HSDPA) standard.
250. As the Commission observed in the Schedule 3 Investigation into amending the Mobile Roaming Service, price in the New Zealand retail market for mobile services appears to be above the long-run cost of supplying these services. Therefore, the Commission believes that the increase in competition in the retail market that is expected to result from co-location is likely to generate a decrease in price towards cost.
251. The Commission considers that, due to the existing high prices of the retail mobile market, the anticipated gains in allocative efficiency⁹⁰ are likely to outweigh any decrease in productive efficiency resulting from the 1.0dB of degradation experienced by the Access Providers of the Mobile Co-location Service.

⁸⁷ Kordia, *Consultation on Vodafone's Standard Terms Proposal for Mobile Co-location*, 26 May 2008, p 10.

⁸⁸ Productive efficiency occurs when a firm combines its inputs or resources in such a way as to produce a given level of output of goods and services at a minimum cost to society.

⁸⁹ Access Economics, *Australian Mobile Telecommunications Industry: Economic Significance & State of the Industry*, July 2007, p 62.

⁹⁰ Allocative efficiency involves ensuring resources are allocated to those producers and consumers who value them most highly. That is, the goods and services that are produced in the economy are the ones most valued by consumers and the distribution of production costs amongst firms within the industry minimises industry-wide costs. In the long run allocative efficiency is achieved by setting price equal to the long-run marginal cost.

252. The allocative efficiency and productive efficiency trade-off that occurs in the downstream retail market through co-location is illustratively captured in the diagram below. The Commission notes that the production efficiencies achieved through avoiding the socially wasteful duplication of mobile network towers, is ignored in this diagram. Taking into account such efficiencies would only serve to increase the benefits associated with co-location that are highlighted in the diagram.

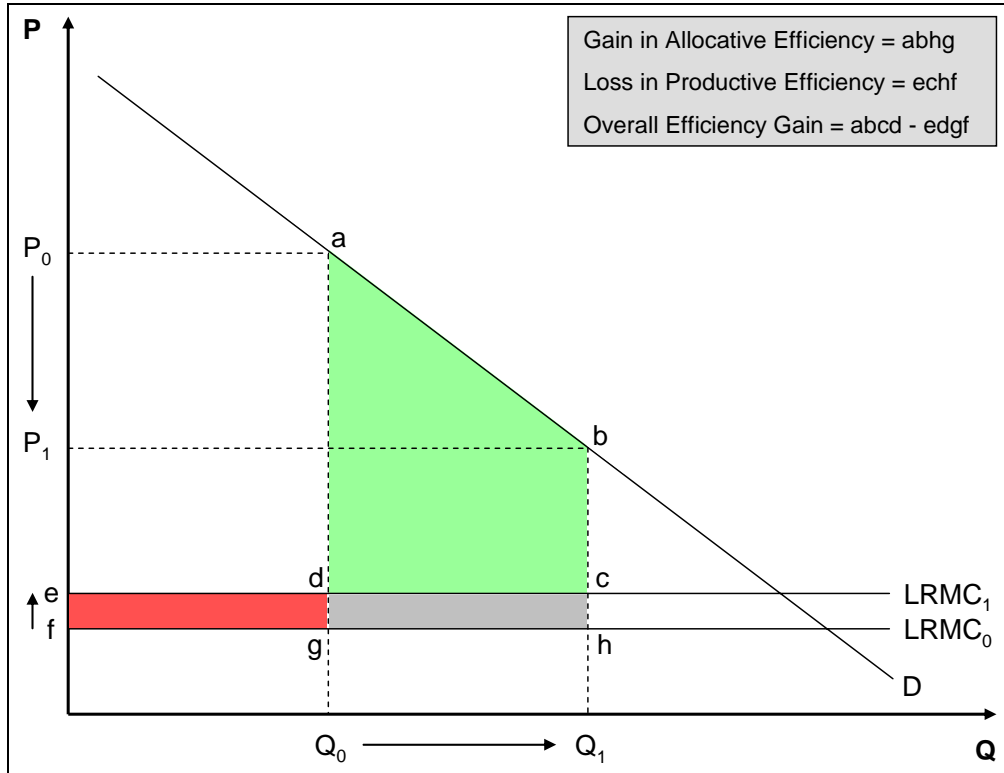


Figure 3: The Allocative and Productive Efficiency Trade-Off

253. Figure 3 illustrates that a fall in price in the mobile retail market from P_0 to P_1 as a result of the increased competition due to co-location, increases the demand for mobile services from Q_0 to Q_1 . Consumers' value the additional output consumed from Q_0 to Q_1 by area abQ_1Q_0 . Where $LRMC_0$ denotes the efficient long-run marginal cost of supplying mobile retail services, the long-run efficient cost to society of the resources used to produce the extra units from Q_0 to Q_1 is equal to area ghQ_1Q_0 . The subsequent gain in allocative efficiency from the price decrease is then equal to area $abhg$.
254. The increased cost to society that results from the 1.0dB interference as a result of Access Providers having to co-locate their equipment is captured by the increase in the cost from $LRMC_0$ to $LRMC_1$. Therefore, the increase in the cost to society of supplying all minutes of use above the efficient cost long-run marginal cost $LRMC_0$, leads to an overall loss in productive efficiency equal to the area $echf$.
255. Comparing the trade-off between the allocative efficiency gain from co-location, with the productive efficiency loss from interference, leads to a net social welfare gain equal to $abcd - edgf$.

256. The Commission believes that in addition to the static allocative and productive efficiency implications of co-location, there is also likely to be an increase in dynamic efficiency as a result of increased competition through co-location.⁹¹ That is, increased competition will place more pressure on mobile network operators over time to invest in new technologies that minimise costs and allow for greater innovation. For example, where an entrant through co-location is able to deploy the most modern mobile technology, such as 3G and High Speed Packet Access (HSPA) technologies, this is likely to elicit a competitive response from existing providers.
257. As noted in the Schedule 3 Investigation into roaming, after Hutchinson launched the first 3G mobile network in Australia in 2003, other carriers deployed 3G networks via network-sharing arrangements.⁹²
258. Accordingly, the Commission considers that the pro-competitive and efficiency benefits resulting from co-location are likely to outweigh the detriment to End Users resulting from performance degradation. The Commission's view is that a definition of unacceptable performance degradation that permits a link budget loss of 1.0dB is in the long-term benefit of End Users of mobile telecommunications services within New Zealand.

Antenna isolation

259. Vodafone's STP includes a section outlining various formulae to assess the isolation between Antennas.
260. The Commission's view is that the parties may use any formulae they consider appropriate to calculate Antenna isolation. The Commission does not consider it necessary to prescribe formulae. However, the Commission considers that Antenna isolation should be such that the parties do not experience unacceptable performance degradation.

⁹¹ Dynamic efficiency ensuring that incentives are maintained for the access provider to undertake existing investment and innovation in essential infrastructure over time.

⁹² Commerce Commission, *Schedule 3 investigation into amending the roaming service – final report*, 10 March 2008, p 37, para 191.

IMPLEMENTATION PLAN

General comments

261. Telecom submitted that the Implementation Plan submitted by Vodafone provides a good framework for the implementation of the Mobile Co-location Service.⁹³ By contrast, NZ Communications submitted that they saw “little or no value” in Vodafone’s proposed Implementation Plan.⁹⁴
262. In addressing the submissions on Vodafone’s Implementation Plan, the Commission has sought to strike a balance between the need to provide the Mobile Co-location Service in a timely manner, and the need to provide sufficient time to establish, test and amend the required systems and processes. The Commission’s view is that a number of significant amendments to Vodafone’s Implementation Plan are required to achieve this balance.
263. Given the number of significant changes that the Commission has made to Vodafone’s STP, the Commission has not provided comments on the specific points made by parties. Rather, the emphasis of the paragraphs below is to provide parties to the STD with a summary of and rationale for key components the draft Implementation Plan.
264. Consistent with Vodafone’s STP, the Implementation Plan (along with the Mobile Co-location General Terms and Schedules) forms part of the Mobile Co-location Terms. In previous STDs, the Implementation Plan has not formed part of the terms of the STD, as the Implementation Plan has fallen away at the completion of the implementation period. The Commission’s view is that it is appropriate to include the Implementation Plan as part of the Mobile Co-location Terms as the Mobile Co-location Service involves multiple Access Providers, and therefore multiple implementation periods.
265. The Commission’s view is that the Implementation Plan will comprise the following:
- an initial implementation phase; and
 - a Soft Launch.

Initial implementation phase

266. The initial implementation phase, which commences on day zero (which is the Determination Date for current Access Providers) and will end 15 working days from date of determination, requires the following:
- the Common Format Site Database to be accurately populated and available to Access Seekers and the Commission;
 - Access Providers to have made the necessary enhancements to their Operational Support Systems; and
 - Access Seekers to have provided forecasts to Access Providers.

⁹³ Telecom, *Detailed Submission on the Implementation Plan*, 23 May 2008, p 1.

⁹⁴ NZ Communications, *Submission to the Commerce Commission in relation to the STP for the Co-location on Cellular Mobile Transmission Sites Service*, 24 May 2008, p 15

267. The Common Format Site Database is to be populated by Access Providers and made available to Access Seekers and the Commission within five working days from the date on which the Mobile Co-location Standard Terms Determination comes into force. Necessary enhancements to Access Provider's Operational Support Systems are also required by this time.
268. It is the Commission's view that a short timeframe is appropriate and reasonable as it is understood that Access Providers have already started work on these steps, which are essential to facilitate an efficient roll out of the Mobile Co-location Service. For example, in its submission, Telecom noted that it is proactively working towards the implementation phase, and has already initiated:
- an internal project to develop systems and processes that are necessary to support the regulated Mobile Co-location process;
 - work on a Common Format Site Database so that Access Seekers will be able to obtain up-to-date information on Telecom's sites; and
 - workshops with Access seekers to work through common problems through experience in the Mobile Co-location process.⁹⁵
269. Access Seekers will provide their forecasts to Access Providers within 10 working days from the Determination Date. The Commission notes that forecasts allow Access Providers to allocate resources in order meet demand from Access Seekers. Therefore, the Commission considers that a requirement for Access Seekers to provide forecasts during the initial implementation phase is appropriate.

Soft launch

270. The Soft Launch will commence in respect of each Access Provider when that Access Provider receives its first request from an Access Seeker. This date will be not less than 15 working days after the Determination Date.
271. Each Access Provider will have their own Soft Launch, during which the Performance Penalties set out in Appendix 2 and Appendix 3 of the Mobile Co-location Service Level Terms will not apply to the first 15 applications of each of the Items set out in that Appendix 2.
272. The Soft Launch will end either when the Access Provider has approved or rejected 15 project plans or 200 working days from its commencement date, whichever occurs first.
273. The Commission's view is that the timeframe during the Soft Launch is reasonable for Access Providers to identify any faults in the Mobile Co-location Service supporting systems or process, and to rectify these.
274. The Commission considers that linking the Soft Launch provisions to the number of Access Seeker Applications is better than linking it to a limited number of working days, in this instance, given the length and number of steps in the provisioning process and the importance of deployment time in the mobile telecommunications industry. For example, after an Access Provider issues their

⁹⁵ Telecom, *Submission on Vodafone Mobile Co-location STP: Main Submission*, 23 May 2008, p 34, para 9.6.

first 15 Site Data Packs, performance penalties will be payable for future defaults on this Service Level (outside the tolerance levels), thereby incentivising efficient delivery in this stage in the provisioning process.

Bow wave limit

275. Telecom proposed a bow wave limit for the first five months following the commencement of the Soft Launch, to address resource constraints where the Access Provider receives multiple Site Data Pack Applications from one or more Access Seekers. The Commission's view is that such a limit is unnecessary and instead proposed a Soft Launch limited to first 15 applications per Access Provider which ends 200 days from the commencement of the Soft Launch, with a capacity limit in the service level terms.

Remedial action

276. TUANZ submitted that the remedial actions for non-compliance with the key performance indicators, as set out in the Implementation Plan, "consist of no more than a process by which the Access Provider may continue to give quarterly excuses as to why it has not complied with the original KPIs".⁹⁶ TUANZ proposed a time limit of 90 days for compliance with a remedial order from the Commission, after which the Commission would invoke the enforcement provisions of the Act involving either a civil infringement notice or a High Court penalty order.

277. The Commission has not, at this stage, included any additional terms regarding remedial actions in the Implementation Plan. The Commission seeks further submissions on this issue.

Dated this 25th day of July 2008



Dr Ross Patterson
Telecommunications Commissioner

⁹⁶ TUANZ, *TUANZ submission to the Commerce Commission, Consultation on Vodafone's Standard Terms Proposal for Mobile Co-location*, 19 May 2008, p. 5

APPENDIX A: MOBILE CO-LOCATION TERMS

Appendix A comprises the following documents:

- **Mobile Co-location General Terms**
 - **Schedule 1: Mobile Co-location Service Description**
 - **Schedule 2: Mobile Co-location Service Level Terms**
 - **Schedule 3: Mobile Co-location Operations Manual**
 - **Schedule 4: Mobile Co-location Access Terms**
 - **Schedule 5: Mobile Co-location Interference Management and Design**
- **Mobile Co-location Implementation Plan**

APPENDIX B: ELIGIBILITY OF ACCESS SEEKERS AND ACCESS PROVIDERS

B1 Under the Telecommunications Act 2001, the definitions of ‘access provider’ and ‘access seeker’ for the Mobile Co-location Service are:

Access provider: Every person who operates a cellular mobile telephone network

Access seeker: Any person who -
(a) operates, or is likely to operate, a cellular mobile telephone network; and
(b) seeks access to the service

Definition of Cellular Mobile Telephone Network

B2 The Commission has defined cellular mobile telephone network in the Mobile Co-location General Terms. This definition is set out as follows:

Cellular Mobile Telephone Network means a telecommunications network:

- (a) that is designed to enable:
 - (i) two-way communications between End Users; and
 - (ii) an End User of the service that uses the network to use the service while moving continuously between places or when standing still; and
- (b) that has the following characteristics:
 - (i) the End User equipment used in relation to the network has a wireless connection to the network;
 - (ii) the service area of the network is divided into a number of contiguous geographical radio coverage areas (known as **cells**) and each cell is served by an antenna and a base station, which transmit and receives signals to and from End User equipment within that cell;
 - (iii) the service that uses the network is capable of re-using the radio frequencies in different cells within the service area; and
 - (iv) as the End User equipment travels between adjacent cells, the service that uses the network uses intercell hand-over functions to:
 - a. determine in which cell the equipment is located; and
 - b. allow the transmit and receive signal connection to transfer from one base station to an adjacent base station when the End User equipment moves out of that cell to an adjacent cell.

Eligibility of Access Seekers and Access Providers as at the determination date

B3 The Commission has defined cellular mobile telephone network as outlined in paragraph above. The Commission has compiled an indicative list of the current technologies that it considers have the characteristics of a cellular mobile telephone network. These technologies include:

- GSM (Global System for Mobile communications (GSM: originally from Groupe Spécial Mobile);
- UMTS (3GPP) (Universal Mobile Telecommunications System);
- 3GPP2 (3rd Generation Partnership Project 2);
- Mobile WiMax (IEEE 802.16e) (Worldwide Interoperability for Microwave Access);
- iBurst (HC-SDMA) (High Capacity Spatial Division Multiple Access);
- and

- PMR (Private Mobile Radio).

B4 In order to determine those parties who are eligible as Access Seekers and Access Providers of the Mobile Co-location Service, the Commission has conducted an assessment of the parties that operate networks in New Zealand that utilise the technologies listed above. The Commission's assessment has been undertaken as at the date of this draft determination, and is outlined below:

Status of Vodafone New Zealand Limited as Access Provider/eligible Access Seeker

B5 Vodafone New Zealand Limited is currently operating a GSM/UMTS network. This Commission considers that this network complies with the definition of a cellular mobile telephone network as set out in paragraph B2.

B6 Therefore, the Commission's view is that Vodafone is an Access Provider of the Mobile Co-location Service.

Status of Telecom New Zealand Limited as Access Provider/eligible Access Seeker

B7 Telecom New Zealand Limited is currently operating a UMTS/CDMA network. This Commission considers that this network complies with the definition of a cellular mobile telephone network as set out in paragraph B2.

B8 Therefore, the Commission's view is that Telecom is an Access Provider of the Mobile Co-location Service.

Status of New Zealand Communications Limited as Access Provider/eligible Access Seeker

B9 NZ Communications Limited is currently operating a GSM network. This Commission considers that this network complies with the definition of a cellular mobile telephone network as set out in paragraph B2.

B10 Therefore, the Commission's view is that NZ Communications is an Access Provider of the Mobile Co-location Service.

Status of Woosh Wireless Limited as Access Provider/eligible Access Seeker

B11 Woosh Wireless Limited is currently operating a TS-CDMA network. This Commission considers that this network complies with the definition of a cellular mobile telephone network as set out in paragraph B2.

B12 Therefore, the Commission's view is that Woosh Wireless Limited is an Access Provider of the Mobile Co-location Service.

Status of TeamTalk Limited as Access Provider/eligible Access Seeker

- B13 TeamTalk Limited is currently operating a APCO-25 network. This Commission considers that this network complies with the definition of a cellular mobile telephone network as set out in paragraph B2.
- B14 Therefore, the Commission's view is that TeamTalk Limited is an Access Provider of the Mobile Co-location Service.

APPENDIX C: SUMMARY PROCESS DIAGRAMS

The following diagrams are indicative only. In the event of any inconsistency between these diagrams and the Mobile Co-location Terms, the Mobile Co-location Terms apply.

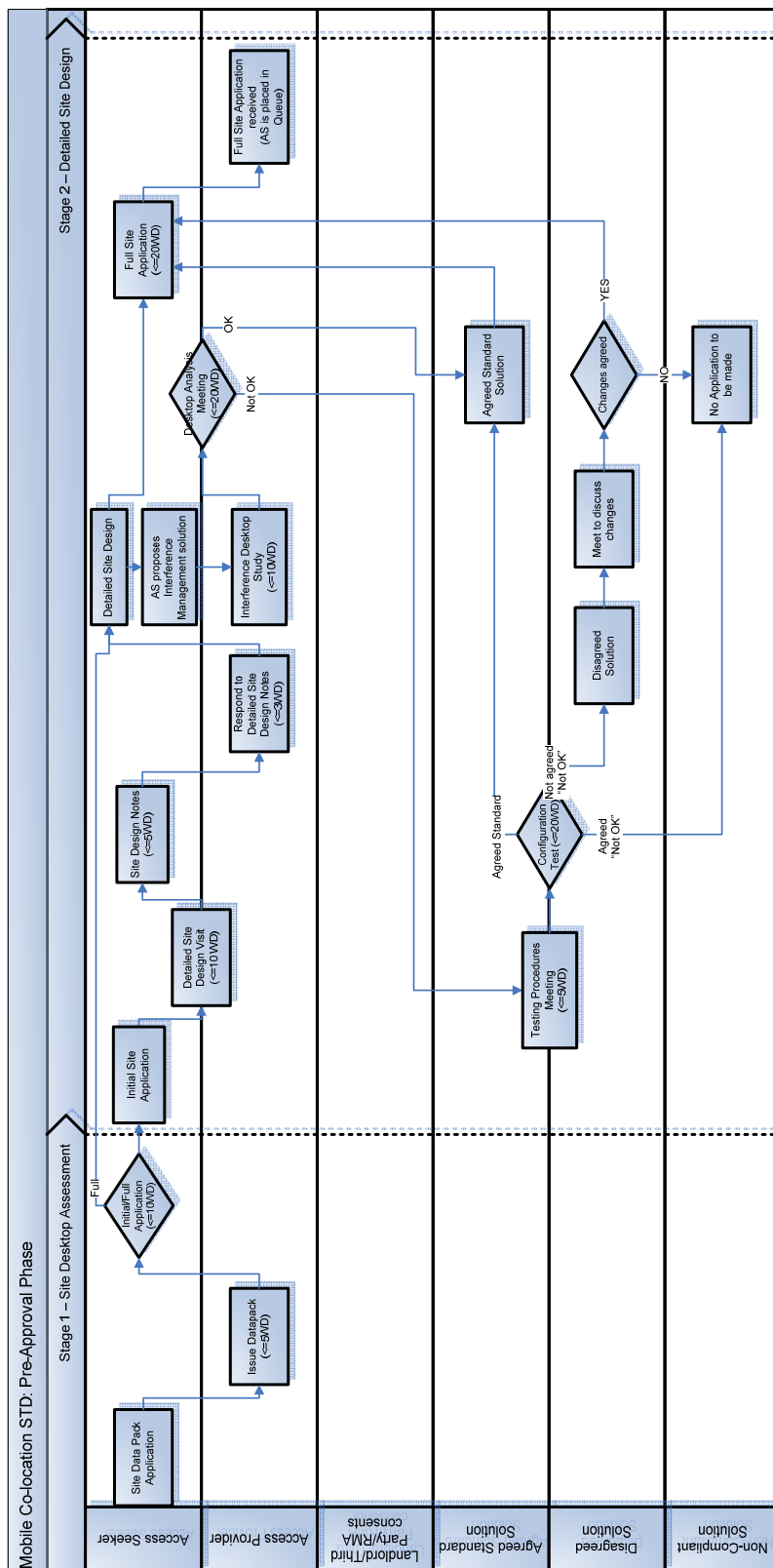


Figure 4: Pre-Approval Phase

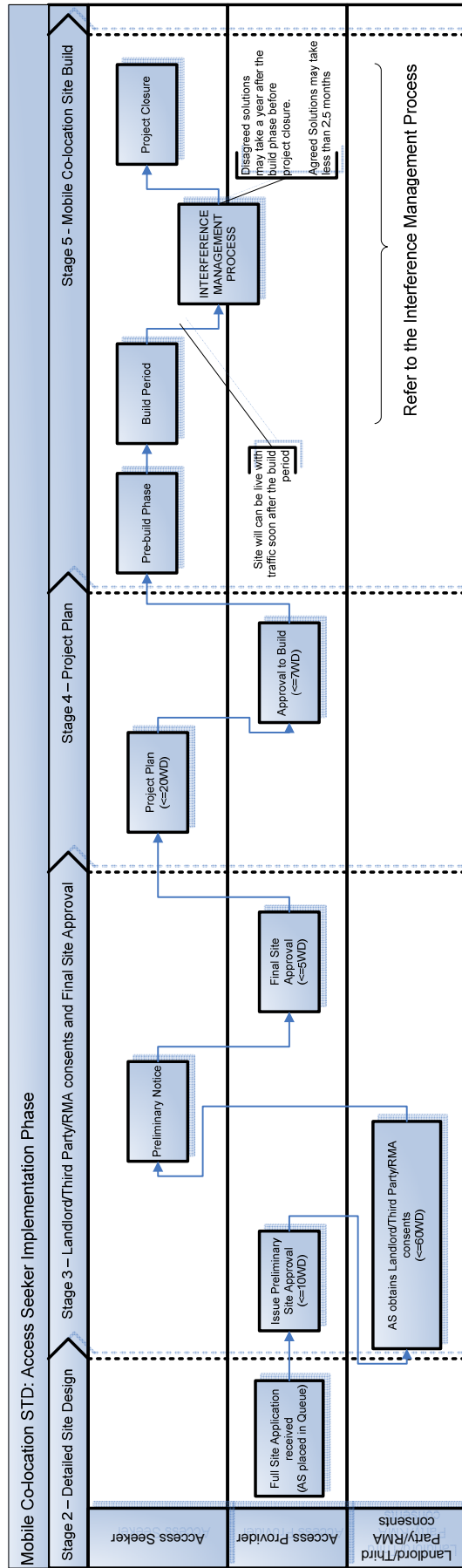
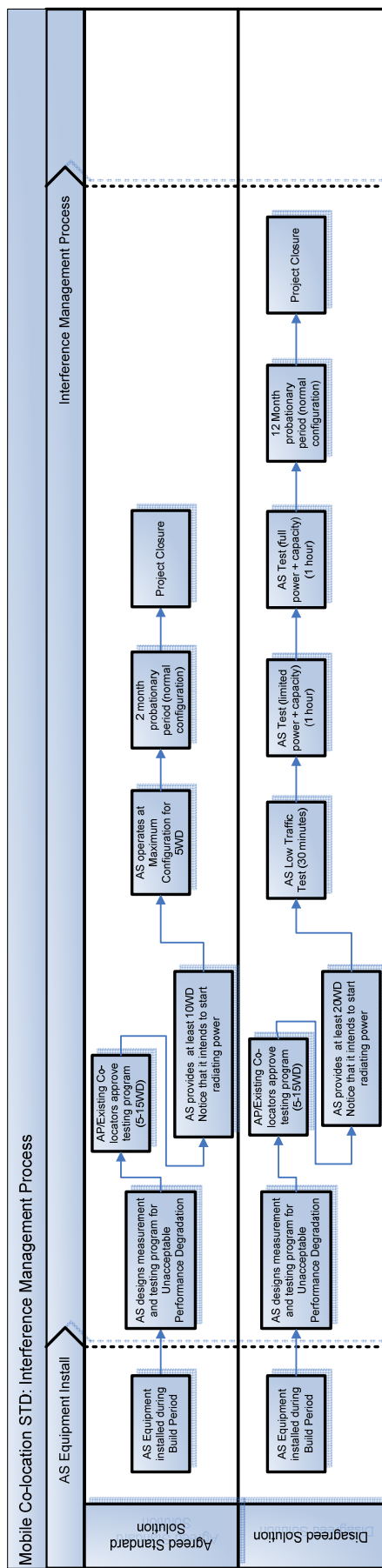


Figure 5: Access Seeker Implementation Phase



Note that there are many steps associated with responding to Unacceptable Performance Degradation that have not been shown on the above drawing

Figure 6: Interference Management Process