

CHANGE AUTHORISATION AGREEMENT (MEDVF17)

This Change Authorisation Agreement is made on the 9th day of August 2016

PARTIES

1. Vodafone New Zealand Limited of 20 Viaduct Harbour Avenue, Auckland (**Vodafone**).
2. Her Majesty The Queen in right of New Zealand acting by and through David Smol, Chief Executive of the Ministry of Business Innovation and Employment (the **Ministry**).

BACKGROUND

- A The Ministry and Vodafone are party to a Rural Broadband Agreement dated 20 April 2011 (the **RBI Agreement**).
- B Under Schedule 5 of the RBI Agreement, either party is entitled to submit Change Requests from time to time seeking changes to the RBI Agreement.
- C Vodafone and the Ministry have agreed to update the RBI Broadband Service and the RBI Broadband and Voice Service specified in Schedule 1 to include a 4G RBI Broadband Service and a 4G RBI Broadband and Voice Service. The parties have also agreed to update Schedule 10 to provide for new pricing for the 4G RBI Broadband Services.
- D Clause 2.2 of Schedule 5 of the RBI Agreement provides that no Change is binding until both parties have signed a Change Authorisation Agreement incorporating details of the Change, the associated Change Impact Statement, and the terms on which the Change will be implemented. This document is such a Change Authorisation Agreement.
- E Vodafone and the Ministry have agreed that a Change Impact Statement is not required as part of this Change Authorisation Agreement.
- F As set out under clause 3.2 of Schedule 5 (Change Request), Vodafone has not consulted with Chorus in relation to the development of the Change Request as Vodafone does not consider that the Change will impact on the Wireless CBDP Backhaul Requirements.
- G The Ministry has agreed to amend Schedule 1 and Schedule 10 as set out in this Change Authorisation Agreement.

THE PARTIES AGREE AS FOLLOWS:

1 Introduction

- 1.1 This Change Authorisation Agreement will take effect as soon as it has been signed by both Parties. This Change Authorisation Agreement amends Schedule 1 of the RBI Agreement and Schedule 10 of the RBI Agreement, but does not create any rights or obligations independent of the RBI Agreement.

2 Amendments to Schedule 1

- 2.1 The Parties agree to update Schedule 1 to provide for the 4G RBI Broadband Service and the 4G RBI Broadband plus Voice Service. Schedule 1 of the RBI Agreement is replaced with Appendix 1 to this Change Authorisation Agreement (attached below) with effect from the date of signature of this Change Authorisation Agreement.

3 Amendments to Schedule 10

- 3.1 The Parties agree to update Schedule 10 to provide for the 4G RBI Broadband Service and the 4G RBI Broadband plus Voice Service. Schedule 10 of the RBI Agreement is replaced with Appendix 2 to this Change Authorisation Agreement (attached below) with effect from the date of signature of this Change Authorisation Agreement.

4 No other Changes

- 4.1 Except as set out in the body of this Change Authorisation Agreement, the RBI Agreement remains unchanged.

SIGNATURES

Signed for and on behalf of Vodafone:



Authorised Person

Name: *A. Baird*
Title: *CTO*
Date: *9/8/2016*

Signed for and on behalf of the Ministry:



Authorised Person

Name: *Jane Tier*
Title: *Manager, ICT Policy and Programmes*
Date: *9/8/2016*

APPENDIX 1

Schedule 1

Service Descriptions

PART A: INTRODUCTION

I Definitions

- 1.1 In this Schedule, unless the context otherwise requires:
- “4G RBI Coverage Area” means the area in which the 4G Reference Signal Received Power at a 4G RBI WT is -104dBm or greater;
- “Collocation Services” means allowing an Access Seeker to locate their equipment on Grant Funded Infrastructure in accordance with the process set out in part C of this Schedule;
- “Wholesale Services” has the meaning set out in paragraph B 1.1;
- “Retail Services” has the meaning set out in part D;
- “Enhanced RBI Broadband Service” means the wholesale service described in paragraph B4;
- “Lawful Intercept” means interception performed in accordance with the Telecommunications (Interception Capability and Security) Act 2013;
- “Operations Manual” means the Operations Manual to be published by Vodafone from time to time;
- “RBI Broadband plus Voice Service” means the wholesale service described in paragraph B5;
- “RBI Broadband Service” means the wholesale service described in paragraph B2; and
- “Vodafone’s Device Network Approvals Process” means the process described in paragraph 9.2.
- 1.2 Unless otherwise provided in this Schedule, capitalised terms shall have the meaning given to them in clause 1 of this Agreement.

2 Available Services

- 2.1 Provided that Telecom builds fibre links in the manner contemplated in paragraph A2.5 below then after building the Grant Funded Infrastructure and installing the Additional Infrastructure, Vodafone will be in a position to provide the following services;
- 2.1.1 co-location services; and
- 2.1.2 mobile voice and data services.
- 2.2 The services set out in paragraph A2.1 above, together with access to the Telecom network that either Vodafone has secured or the Ministry has required Telecom to provide

open access to, will enable Vodafone to make available in Zone 4 a broadband service with minimum peak speeds of 5Mbps downlink and 500 Kbps uplink (the "Rural Broadband Service");

- 2.3 Vodafone will make available on Vodafone's standard terms and conditions the Rural Broadband Service to Vodafone's wholesale and retail customers.
- 2.4 Notwithstanding paragraph A2.3, Vodafone has committed to the Ministry that the specific wholesale product set out in Part B below, and the specific retail product set out in Part D below (the "Ministry RBI Services") will be available to be accessed by 80% of households in Zone 4, (such calculation to be determined based on the Terralink data that was supplied by Vodafone to the Ministry in the Proposal) ("Covered Households") on the following terms and conditions and in accordance with its obligations under the Agreement. The Ministry acknowledges that the requirement to make the Ministry RBI Services available to 80% of households in Zone 4 does not include the requirement to make the 4G RBI Broadband Service available to 80% of households in Zone 4.
- 2.5 In order for Vodafone to be able to provide the Ministry RBI Services, the Ministry will ensure that the Fibre Build Contract requires Telecom to:
 - 2.5.1 build fibre to the Grant Funded Sites; and
 - 2.5.2 make available to Vodafone backhaul services as a Layer 2 Service suitable for supporting the Rural Telecommunications Services,within timescales that reasonably allow Vodafone to meet its obligations under this Agreement.
- 2.6 The Ministry acknowledges that in order for Vodafone to provide the Rural Telecommunications Services, Vodafone will need a Layer 2 Service, which service is materially the same as that provided by Telecom to Vodafone as at the date of this Agreement, and which service will be from the Grant Funded Sites and the non-Grant Funded Sites from which the Rural Telecommunications Services are to be provided to a nominated handover point.

PART B: WHOLESALE SERVICE

1 Wholesale Service Description

- 1.1 Vodafone will provide Access Seekers with the opportunity to purchase the "Vodafone Rural Broadband" product set described in paragraph B1.3 below (the "Wholesale Services"), which will allow Access Seekers to offer end users their own-branded wireless broadband and voice services. These services are delivered from a Vodafone-approved wireless terminal ("WT") to the point of interconnect nearest to the rural region of the relevant Infrastructure ("POI") with the Access Seeker.
- 1.2 The Access Seeker will:
 - 1.2.1 carry the data and/or voice traffic (as appropriate) from the POI, on its own network; and
 - 1.2.2 supply and install the WT (as approved by Vodafone) at the End User premises along with any required wiring or external antennas in accordance with Vodafone's installation guidelines.
- 1.3 Vodafone will offer Access Seekers the following three products under the Wholesale Services:

- 1.3.1 the "RBI Broadband Service" - a best efforts broadband packet data service described in further detail in paragraph 2 below;
 - 1.3.2 the "Enhanced RBI Broadband Service" that offers its End Users simultaneous delivery of the RBI Broadband Service and a prioritised traffic class (up to 40Kbps) over a single wireless connection and which is described in more detail in paragraph 3 below. This service will be designed to support G.729 and will be available by 31 March 2012; and
 - 1.3.3 the "RBI Broadband plus Voice Service" that offers its Ends Users the RBI Broadband Service together with a voice service.
- 1.4 The Wholesale Services are not available for sale directly to End Users. However the Wholesale Services are available for sale to Access Seekers.

2 RBI Broadband Service Specifications

- 2.1 The RBI Broadband Service is a wireless service that enables access to, and interconnection with, that part of Vodafone's network that connects End Users premises to Vodafone's local data network (or equivalent facility) and includes backhaul from that local data network back to a POI. It provides an Access Seeker with an internet grade "best efforts" bitstream service and enables an Access Seeker to offer its End Users fixed wireless broadband services.
- 2.2 The RBI Broadband Service (nominal 1500 byte packet) consists of:
- the Standard RBI Broadband Service, and, where available:
 - the 4G RBI Broadband Service.

These two RBI Broadband Services are described in paragraphs 2.2.1 and 2.2.2 below.

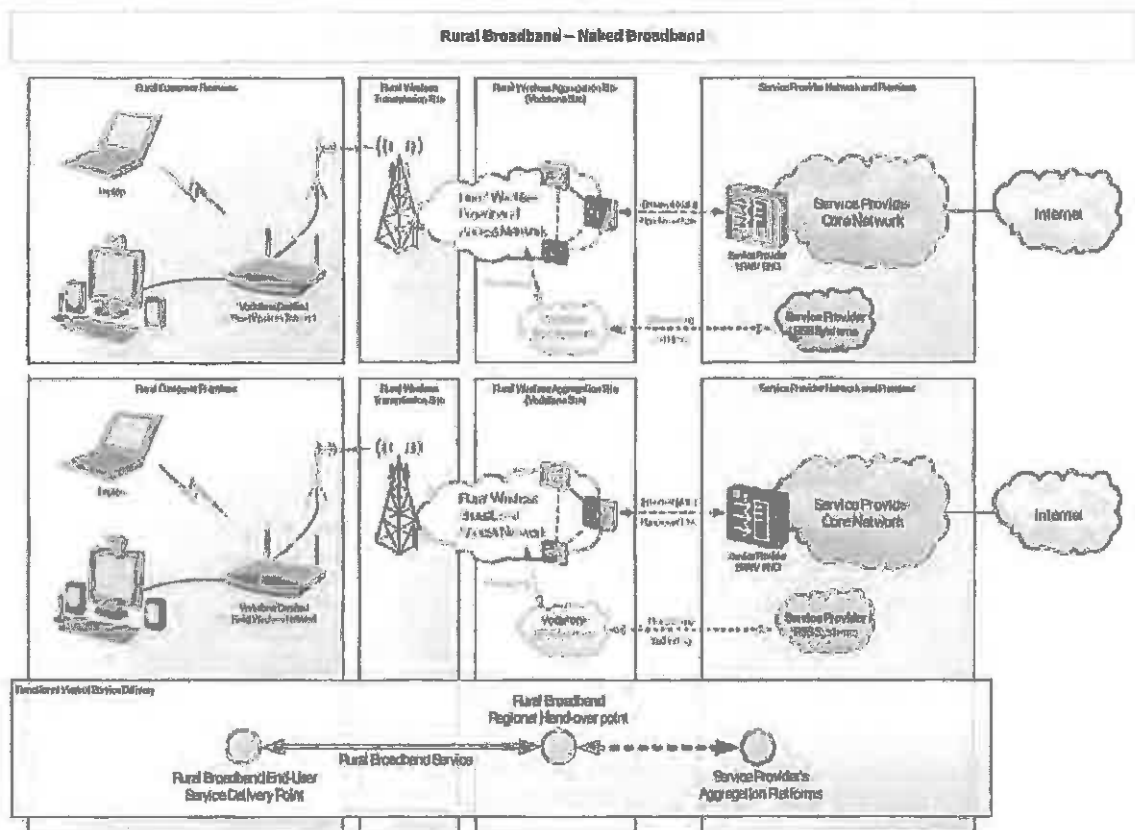
2.2.1 The Standard RBI Broadband Service:

- consists of a single "best efforts" IP broadband service designed to have a peak throughput of at least 5Mbps downlink and 500Kbps uplink, and dimensioned to deliver a 99.9% probability of providing to any End User a minimum average throughput of 45Kbps downlink during any 15 minute period;
- is supplied to an End User by a wireless radio transmitter located at a Vodafone cell site and a wireless terminal that has been installed by the Access Seeker in accordance with Vodafone's guidelines;
- transports an Access Seeker's internet traffic from the WT at an End User's premises to the relevant Handover Point (as described in paragraph 5 below);
- has a mean one way packet delay of <1 second; and
- has no specific metric for packet delay variation or packet loss ratio.

2.2.2 The 4G RBI Broadband Service:

- is only available in a 4G RBI Coverage Area, to those End Users using a Vodafone approved 4G RBI WT (Vodafone B315 CPE or later), installed by Vodafone or a Vodafone approved third party;

- consists of a single “best efforts” IP broadband service designed to have a peak throughput of at least 30Mbps downlink and 5Mbps uplink, and dimensioned to deliver:
 - a 90% probability of providing to any End User a minimum average throughput of 5Mbps downlink and 2Mbps uplink; and
 - a 99% probability of providing to any End User a minimum average throughput of 250Kbps downlink and 100Kbps uplink in any 15 minutes period.
 - is supplied to an End User by a wireless radio transmitter located at a Vodafone cell site and a 4G wireless terminal that has been installed by the Access Seeker in accordance with Vodafone’s guidelines;
 - transports an Access Seeker’s internet traffic from the WT at an End User’s premises to the relevant Handover Point (as described in paragraph 7 below);
 - has a 95% probability of a mean packet delay of <0.1 second roundtrip between the WT at an End User’s premises and the relevant Handover Point; and
 - has no specific metric for packet delay variation or packet loss ratio.
- 2.3 Achievement of coverage such that 80% of Covered Households in Zone 4 can receive a rural broadband service in the manner set out in paragraph B2.2.1 above is based on the use of a Vodafone-approved WT connected to an external antenna that is mounted at least 4.5m above ground and that meets the requirements set out in the column headed “External Antenna Specification” in the table in Appendix 1 - Engineering Design Standards (an “Appropriate Aerial”).
- 2.4 The supply of the RBI Broadband Service is not conditional on a requirement that the Access Seeker, the End User, or any other person must purchase any other product from Vodafone.
- 2.5 The following diagram illustrates the RBI Broadband Service:



3 RBI Broadband Service Constraints

3.1 The maximum upstream or downstream speed that may be experienced by End Users in respect of the RBI Broadband Service is subject to and may be limited by:

- 3.1.1 Specification of the WT;
- 3.1.2 Incorrect installation of WT, wiring or antenna;
- 3.1.3 Absence of an Appropriate Aerial or incorrect installation of the Appropriate Aerial or any wiring;
- 3.1.4 The configuration and/or quality of wiring of End User computer equipment or other connected equipment;
- 3.1.5 Performance of antenna;
- 3.1.6 The Access Seeker's network;
- 3.1.7 End User's location;
- 3.1.8 The level of network congestion; and
- 3.1.9 Presence and degree of external interference (from potential sources such as poor suppression of AC power, electric fences, radio transmitters etc).

4 Enhanced RBI Broadband Service

4.1 The Enhanced RBI Broadband Service consists of:

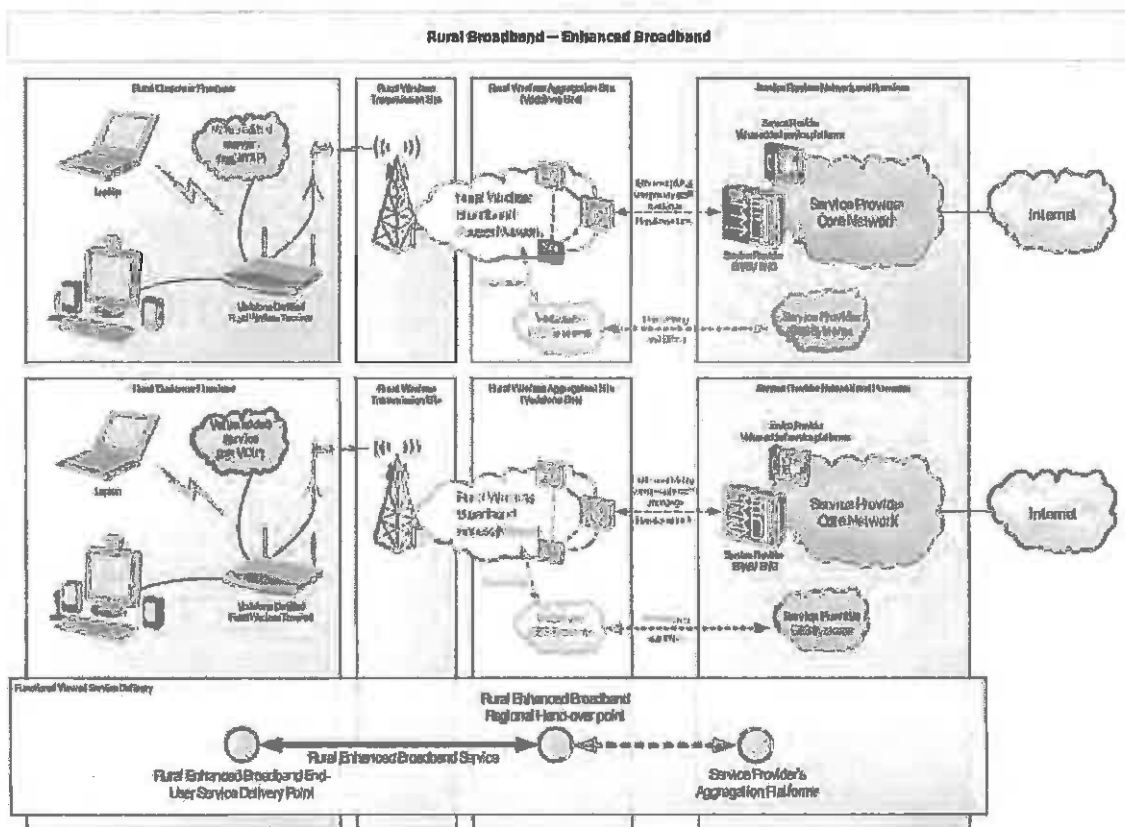
4.1.1 the Standard RBI Broadband Service; and

4.1.2 a prioritised internet protocol traffic capability with the following metrics:

a) throughput of 40 Kbps (200byte packet); and

b) a design target for latency of 100ms or better 99% of the time (as measured between the WT and the Handover Point (as defined in paragraph B7.1)

4.2 The following diagram illustrates the Enhanced RBI Broadband Service:



5 RBI Broadband plus Voice Service

5.1 The RBI Broadband plus Voice Service consists of:

5.1.1 the RBI Broadband Service; and

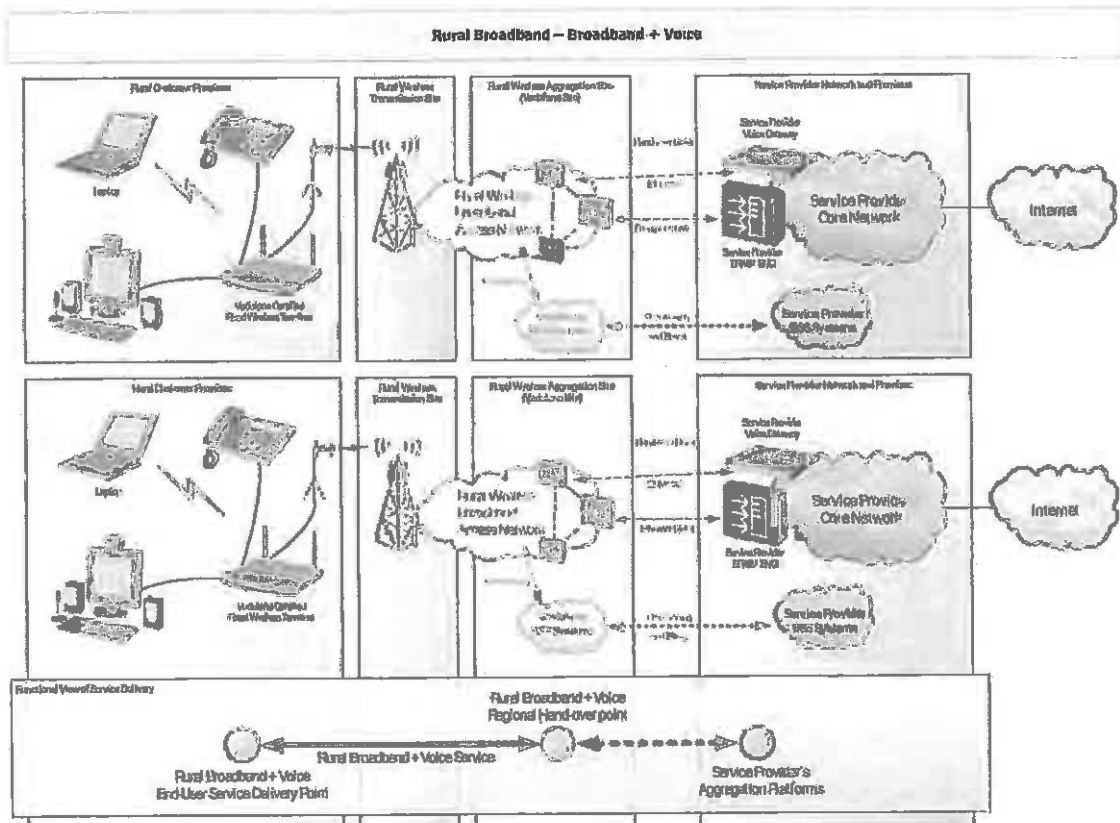
5.1.2 a voice service that is delivered via a separate 3GPP Release 99 GSM/WCDMA circuit switched voice channel. This voice channel supports voice service only and it will not be suitable for supporting:

a) fax service;

- b) monitored house alarm;
- c) medic alarm link;
- d) remote to download SKY "pay per view" movies or games, or use Sky betting or similar SKY services;
- e) unapproved calling cards;
- f) 3 way calling or audio conference calling; or
- g) text messages (SMS).

5.1.3 If the 4G RBI Broadband Service is available and there is a voice call through the WT, the 4G RBI Broadband Service will drop back to the Standard RBI Broadband Service during the duration of the voice call.

5.2 The following diagram illustrates the Rural Broadband plus Voice Service:



6 General Wholesale Service Requirements

6.1 The Access Seeker is to fulfil any authentication, authorisation and addressing functions for the service provided to End Users and is responsible for providing internet connectivity and any other value-added services. The Access Seeker is to provide all Layer 3 functions and is responsible for interactions with the emergency services relating to its End Users.

- 6.2 Vodafone will perform voice-based Lawful Intercept.
- 6.3 The Access Seeker will be responsible for data-based Lawful Intercept. Vodafone will send all the Access Seeker's customer traffic over the L2TP handover link and the Access Seeker will implement the required trace for their subscriber on the L2TP terminating device (B-RAS, BNG).

7 Handover

- 7.1 The Access Seeker is required to interconnect with Vodafone at the nearest handover point set out in paragraph B7.2 below (each, a "Handover Point") in accordance with paragraph B7.3. Interconnection at the Handover Point is required for handover of the RBI Broadband Service, Enhanced RBI Broadband Service and the RBI Broadband plus Voice Service.
- 7.2 Handover Points will be located in Auckland, Wellington and Christchurch.
- 7.3 Traffic originating from End Users located:

- 7.3.1 in the South Island will be handed over at the Handover Point located in Christchurch;
- 7.3.2 north of Taupo will be handed over at the Handover Point located in Auckland; and
- 7.3.3 south of Taupo will be handed over at the Handover Point located in Wellington,

Exact boundaries for Handover Points are available from Vodafone on request.

- 7.4 Broadband traffic will be delivered to the Access Seeker as L2TP (version 2) using the technical standards set out in the table at paragraph 7.5 below:
- 7.5 Voice traffic interconnect links will conform to the defacto standard of ISUP (ISDN User Part) - PTC331 (Permit to connect). The voice payload is carried in a specific 64k timeslot within an E1 bearer (or multiple E1s) transcoded to the G.711 standard.

Service	Interface	Physical connection
RBI Broadband Service	Gigabit Ethernet (Handover links will consist of a single VLAN over which data to and from the regional serving node will be exchanged with the wholesale service provider using the L2TP protocol)	Optical
Voice	E1 (2Mbit/s)	Electrical

- 7.6 The Service Provider is responsible for providing handover fibres that connect from the Access Seeker's network to the Vodafone Optical Fibre Distribution Frame (OFDF) at the Handover Point.

8 Geographic Availability

- 8.1 The RBI Broadband Service, Enhanced RBI Broadband Service and RBI Broadband plus Voice Service are only available in those parts of Zone 4 indicated on the Vodafone wholesale website and may not be used outside these areas.
- 8.2 The MED acknowledges that due to geographic factors, there may be certain locations within the area described above where the Wholesale Services cannot be received or can only be received with degraded levels of performance. Vodafone will publish such locations on the Vodafone wholesale website as they become known and amend its coverage maps accordingly.
- 8.3 Vodafone will provide access to a coverage tool that will enable Access Seekers to determine where the RBI Broadband Service is available.

9 Operations and Processes

- 9.1 Operational processes and installation standards will be set out in an Operations Manual.
- 9.2 Access Seekers may purchase a WT terminal from Vodafone or may provide their own WT which must meet the requirements of the reference installation set out in Appendix A and be approved by Vodafone. Vodafone's "Device Network Approvals Process" is set out below:
 - 9.2.1 Access Seeker to send 4 units of the device to Vodafone Wholesale Operations Manager as set out in the Operations Manual.
 - 9.2.2 Wholesale Operations Manager to contact Vodafone's Terminals Service Specialist to organise the correct test scripts being sent to Vodafone's third party test partner (currently WDS).
 - 9.2.3 Wholesale Operations Manager to send devices to WDS for testing. Testing process takes approximately 3 weeks to complete.
 - 9.2.4 Once testing is completed, WDS to send devices back to Wholesale Operations Manager and to advise of status of device e.g. approved/not approved.
 - 9.2.5 Wholesale Operations Manager to communicate test results to Access Seeker and to return 3 of the devices to the Access Seeker. One is kept at WDS in case further testing is required.
 - 9.2.6 Wholesale Operations Manager to raise debit adjustment for device testing on the Access Seeker's monthly invoice. Charges will be set out in the Operations Manual. At the date of this Agreement the charge is generally approximately \$8,000 per device model for testing.
- 9.3 If an Access Seeker wishes to purchase WTs from Vodafone it must do so via Vodafone's logistics partner, Brightpoint. The Access Seeker must complete an application for a Brightpoint account and lodge this with the Vodafone Operations Manager in accordance with the Operations Manual. Once approved Vodafone will provide the Access Seeker with the current WT price list. Updates to the price list will be provided on a regular basis. To order a WT from Brightpoint the Access Seeker must comply with the process below:
 - 9.3.1 Obtain price & product code from the latest RBI WT price list;
 - 9.3.2 Raise purchase order on Supplier Brightpoint;
 - 9.3.3 Send purchase order to Brightpoint; and
 - 9.3.4 Order is automatically accepted & dispatched if stock is available & order is

correct.

9.4 It is the Access Seeker's responsibility to ensure that WTs are installed in accordance with any guidelines issued by Vodafone from time to time.

10 SIM Cards and TAC Locking

10.1 Access Seekers must only use SIM cards purchased from Vodafone to provide the Wholesale Services. SIM cards must be ordered in minimum quantities of 500.

10.2 All SIM cards must be "TAC locked", i.e. the SIM will only be able to be used with certain approved devices. This is achieved through the first eight digits of the approved device's IMEI number i.e the TAC (Type Allocation Code) being loaded onto the SIM at the point of manufacture. The IMEI is the WT unique device number.

10.3 At the time of ordering SIM cards, the Access Seeker must specify to Vodafone the TAC code or codes which it would like to have imbedded onto the SIM cards. The number of TAC codes able to be loaded onto a SIM card will be limited and Vodafone will advise Access Seekers of the then-current limits.

11 Non Price Terms

11.1 Subject to paragraphs B11.2 and B11.3 below, Vodafone will meet the service levels attached in Appendix 2 in respect of the Wholesale Services ("Service Levels").

11.2 Vodafone will calculate whether or not it has met the Service Levels in accordance with the following calculation, provided that Vodafone will only be required to calculate whether or not it has met the Service Levels where there is a minimum of 10 incidents or requests in a Service Level category in that month:

11.2.1 Service Level to be attained= number of incidents in a Service Level category in a month that meet the per incident target set out in Appendix 2 /the total number of incidents in that Service Level category in that month.

This result is rounded down to the nearest incident or request. For example, if an Access Seeker sent Vodafone 10 Priority 3 incidents then to meet its Service Level Vodafone would need to restore 9 of these within 3 days.

11.3 Vodafone will not be liable for any failure to meet a Service Level (a "Service Level Default") where:

11.3.1 a Service Level Default is due to a Force Majeure Event;

11.3.2 a Service Level Default is a direct result of an Access Seeker failing to comply with an express obligation under its agreement with Vodafone;

11.3.3 the Operations Manual states that Vodafone is not required to meet the Service Levels and sets out the reasons why;

11.3.4 a Service Level Default is a direct result of:

- a) a fault that is the Access Seeker's responsibility;
- b) anything (including any fault) caused by the communications network or equipment of any third party or the Access Seeker's network or the Access Seeker's equipment; or
- c) the absence or incorrect installation of an Appropriate Aerial,

- 11.3.5 a fault is reported and no fault for which Vodafone is responsible is detected when the Wholesale Service is tested from end to end;
 - 11.3.6 a Service Level Default is due to a failure by the Access Seeker or its End User to allow access to the premises or equipment when reasonably requested by Vodafone or its agent;
 - 11.3.7 remedying a Service Level Default would result in a material health and safety risk for a Vodafone employee or agent, the avoidance of which could not have been realistically predicted by Vodafone; or
 - 11.3.8 it is agreed between Vodafone and the Access Seeker that Vodafone is not required to meet the Service Levels.
- 11.4 Where Vodafone decides that a Service Level Default has not occurred because one or more of the exclusions set out in paragraph B11.3 apply, the details of the exclusion are to be recorded and reported in Vodafone's monthly performance reports.
- 11.5 In the event of a Service Level Default (except in respect of Priority 3 and Priority 4 incidents - as defined in Appendix 2 to this schedule) Vodafone will provide a report to the all Access Seeker(s) setting out:
- 11.5.1 the cause of and procedure to correcting such Service Level Default; and
 - 11.5.2 the steps taken to remedy the Service Level Default and the effectiveness of those steps.
- 11.6 The reports provided as above must be made available to Access Seekers via a restricted area on the Vodafone Wholesale website.
- 11.7 Vodafone will provide to all Access Seekers a three month rolling forecast containing a list of those Vodafone cell sites on which it proposes to make the 4G RBl Broadband Service available.

12 Portal Service

- 12.1 Access Seekers will be able log requests (e.g new connections, moves, adds, changes) via a web-based portal service. This will be available for use from 01 December 2011 onwards. Once available all such requests must be logged via the portal service as this will be the mechanism for tracking incidents and reporting on Service Level performance.
- 12.2 Faults are to be logged directly with the Vodafone call centre on such number as advised by Vodafone from time to time.

PART C: CO-LOCATION SERVICE

1 Availability

- 1.1 The Co-location Service will be available at the Grant Funded Sites. Access Seekers can also apply for co-location on all existing Vodafone sites (or third party sites where Vodafone is co-located) under the current collocation service as described by the "Standard Terms Determination for Co-Location on Cellular Mobile Transmission Sites" issued under the Telecommunications Act 2001, as updated or replaced from time-to-time (the "Mobile Co-location STD") .

2 RBI Co-location Database

- 2.1 Vodafone will publish an on-line database containing information on the status and progress of Grant Funded Sites ("Co-Location Database"). The intent is to enable Access Seekers to monitor the progress of the Grant Funded Sites and to be in a position to make informed decisions about receiving the Co-Location Services. The Co-Location Database will include the following information:

- 2.1.1 Site name and site code;

- 2.1.2 Location through eastings and northings; and

- 2.1.3 The intended key programme milestones with dates, including those relating to design, acquisition and build tasks.

- 2.2 Access Seekers must register and agree to terms and conditions in order to access the Co-location Database.

- 2.3 Vodafone will notify Access Seekers that have registered to use the Co-location Database when a preferred Grant Funded Location has reached a stage of sufficient certainty as to where that Grant Funded Site will be located that Access Seekers may apply for a site data pack, which will contain an additional level of site-specific information about that Grant Funded Site, including expected terms of agreement with landowner, RMA considerations and other relevant information (the "Site Data Pack"). The purpose of the Site Data Pack is to provide Access Seekers with enough information to enable the Access Seeker to determine if they wish to participate in the Detailed Site Design Process for that Grant Funded Site described in paragraph C3 below.

- 2.4 Access Seekers must notify Vodafone if they wish to be involved in the Detailed Site Design Process for a Grant Funded Site within 20 Working Days of being notified that a Site Data Pack for that Grant Funded Site is available (the "Design Opt In Period").

- 2.5 Vodafone reserves the right to charge Access Seekers a cost-based application fee for the Site Data Pack, not to exceed \$500 (adjusted annually to take into account any increase in the "Consumer Price Index").

3 Detailed Site Design

- 3.1 Access Seekers that elect to participate in the process set out in paragraphs C3.3 to 3.5 below (the "Detailed Site Design Process") for a Grant Funded Site before the end of the Design Opt In Period ("Relevant Access Seekers") will pay a cost-based fee for the design phase not to exceed \$2000 (adjusted annually to take into account any increase in the "Consumer Price Index"). Vodafone will apply such fees received to the design of the Grant Funded Assets and any claim by Vodafone for the Grant will reflect any such fees received by Vodafone.

3.2 Relevant Access Seekers and Vodafone must comply with the following principles during the Detailed Site Design Process:

- 3.2.1 participate fully and negotiate in good faith with the aim of finding an allocation of space within the relevant Grant Funded Site that is mutually agreeable to all parties;
- 3.2.2 adhere to any process agreed for the conduct of the negotiations and any further commitments made relating to the protection of Confidential Information;
- 3.2.3 consider, and respond to, any proposals made by the other parties promptly;
- 3.2.4 where a party does not accept a proposal, state the reason or reasons for its non-acceptance;
- 3.2.5 work together to identify barriers to agreement and will actively explore ways to overcome those differences. However, the parties are not required to continue to meet and discuss matters which have been considered and responded to; and
- 3.2.6 not behave in ways which may undermine the good faith nature of the negotiations.

3.3 Vodafone will:

- 3.3.1 co-ordinate and distribute the detailed site design notes;
- 3.3.2 provide the Relevant Access Seekers with an initial site design for the Relevant Access Seekers to comment on, which will incorporate reasonable technical information supplied by the Access Seeker;
- 3.3.3 arrange, if requested, for the Relevant Access Seekers to visit the relevant Grant Funded Site at up to 30 days following the start of the Detailed Site Design Process; and
- 3.3.4 consider any reasonable feedback provided by the Relevant Access Seekers and, if appropriate, circulate an updated draft site design for comment.

3.4 The output of the Detailed Site Design Process will be a "Final Detailed Site Design" for the relevant Grant Funded Site.

3.5 If Vodafone and the Relevant Access Seekers cannot agree on a Final Detailed Site Design within 60 Working Days of the end of the Design Opt In Period, Vodafone will determine the Final Detailed Site Design for the Grant Funded Site and provide such Final Detailed Site Design to the Access Seekers.

3.6 Upon receipt of the Final Detailed Site Design:

- 3.6.1 if Vodafone has determined the Final Detailed Site Design in accordance with paragraph C3.4 above, the Relevant Access Seekers will have 10 Working Days to notify Vodafone if they do not wish to receive the Co-location Services in respect of that Grant Funded Site, after which; or
- 3.6.2 if the Access Seekers have mutually agreed the Final Detailed Site Design in accordance with paragraph C3.3, then,

(subject to paragraph C4.5) the Relevant Access Seeker will be deemed to have committed to receive the Co-Location Services for that Grant Funded Site.

3.7 If an Access Seeker does not participate in the Detailed Site Design Process, and at some subsequent stage, but prior to achieving Consents Granted at the relevant Grant Funded Site, wishes to redesign the Grant Funded Site to accommodate that Access Seeker's equipment, the following principles will apply:

- 3.7.1 the late Access Seeker will take responsibility for producing a redesign of the Grant Funded Site and will circulate that for any Relevant Access Seekers and Vodafone to consider;
- 3.7.2 the late Access Seeker, the Relevant Access Seekers and Vodafone will act in good faith, and act reasonably, when considering whether or not to accept the re-design but will not be obliged to accept the re-design if it may:
 - a) materially degrade the services that the Relevant Access Seeker will be able to offer to End Users, or will be able to receive from Vodafone, from that Grant Funded Site;
 - b) delay Vodafone's achievement of any of the Milestones in respect of the Grant Funded Infrastructure or delay the installation of the Additional Infrastructure, including the achievement of Consents Granted; or
 - c) substantially increase costs to either Vodafone in providing the Design and Build Services or the Rural Telecommunications Services or to Relevant Access Seekers in receiving the Co-Location Service or providing services to End Users; or
 - d) adversely affect Vodafone's ability to comply with its obligations to the Ministry in this Agreement; or
 - e) adversely affect Vodafone's ability to comply with its commitments to, or to receive the benefits of its commitments from, Telecom under the Backhaul Agreement or any other agreement with Telecom upon which Vodafone relies to enable it to meet its obligations under this Agreement; and
- 3.7.3 the late Access Seeker will bear the costs of the re-design, as well as obtaining any landowner or RMA consents that may be required.

Alternatively, the late Access Seeker may apply to put equipment on the Grant Funded Site once it is built, in accordance with the Mobile Co-Location STD collocation service.

4 Landlord/Third Party Approvals and RMA Consent

- 4.1 Vodafone may work to obtain Lease Finalised and/or Consents Granted contemporaneously with running the Detailed Site Design Process for a Grant Funded Site.
- 4.2 Relevant Access Seekers will need to provide Vodafone with any information and evidence necessary to support any Resource Management Act 1991 ("RMA") application or hearing, in a timely manner. Parties may need to review and repeat some parts of the Detailed Site Design Process as a result of RMA requirements.
- 4.3 If:
 - 4.3.1 RMA consent is:
 - a) declined for a Grant Funded Site;
 - b) granted on terms which are unacceptable to Vodafone;

- c) appealed; or
- d) is considered to be unlikely to be obtained; or

4.3.2 there is substantial community opposition in respect of the Grant Funded Site,

leading to significant delays to the Design and Build Services at that Grant Funded Site project or a material change in the design is required that materially negatively affects the service that the Relevant Access Seekers may be able to offer End Users from that Grant Funded Site, then Vodafone:

4.3.3 shall not, without the consent of Relevant Access Seekers (such consent not to be unreasonably withheld, delayed or conditioned), proceed to construct the Grant Funded Infrastructure at the relevant Grant Funded Site using a different design; and

4.3.4 may decide not to further pursue that Grant Funded Site and will notify the Relevant Access Seekers accordingly. In such circumstances Vodafone will have no liability to any Access Seekers relating to that Grant Funded Site.

4.4 Vodafone will supply each Relevant Access Seeker with a copy of the signed document that has led to it obtaining Lease Granted in respect of a Grant Funded Site once available.

4.5 At the latter of the conclusion of the Final Site Design Phase and obtaining Lease Granted, each Relevant Access Seeker will be required to formally commit to receive the Co-Location Service and to installing its equipment at the Grant Funded Site. Vodafone will issue to the Relevant Access Seekers a "Schedule of Site Specific Conditions" which includes each Relevant Access Seeker's estimated pro-rata share of the site rental and ongoing charges. A Relevant Access Seeker has 10 Working Days from receipt of the Schedule of Site Specific Conditions to request any reasonable amendments to those conditions, which Vodafone may take into account, and thereafter will be deemed to commit to receive the Co-location Services at that Grant Funded Site. For the avoidance of doubt, a Relevant Access Seeker will only be able to notify Vodafone that it does not want to receive the Co-Location Services in respect of that Grant Funded Site if:

4.5.1 the terms of the lease in respect of the Grant Funded Site are materially adversely different from the terms that were outlined in the Site Data Pack; or

4.5.2 the RMA consent that was granted in respect of the Grant Funded infrastructure means that such Grant Funded Infrastructure will be materially adversely different from the infrastructure contemplated in the Final Detailed Site Design.

4.6 The Relevant Access Seeker will be liable for Co-location Charges from the date that it notifies Vodafone that it commits to co-locate at that Grant Funded Site or in the event that no response is received, the date that it is deemed to commit to co-locate at that Grant Funded Site in accordance with paragraph C4.5, such Co-Location Costs to be payable in accordance with the terms set out in the Schedule of Site Specific Conditions.

5 Construction Drawings

5.1 The Relevant Access Seekers will provide Vodafone with further technical and standard information necessary for Vodafone to prepare construction drawings for the Grant Funded Infrastructure to be built at a Grant Funded Site ("Construction Drawings"). A draft of the Construction Drawings will be distributed and the parties will have the opportunity to request reasonable changes, and subject to paragraph C5.2, a final set of Construction Drawings will be produced as mutually agreed.

- 5.2 If Construction Drawings are unable to be agreed within 40 Working Days of the date that Vodafone distributes the first draft of the Construction Drawings, Vodafone will determine the final Construction Drawings. In agreeing Construction Drawings the parties will comply with the principles set out in paragraph C3.2 above as reasonably appropriate to this stage of the process.
- 5.3 Vodafone will issue a notice of an intended construction commencement date to the Relevant Access Seekers a minimum of 3 months prior to the start of the Build Complete Milestone. Vodafone will prepare a project plan which will be circulated for review and comment which will detail the methodology and timing of the construction activities.

6 Build

- 6.1 The Relevant Access Seekers must use their reasonable endeavours to work together with each other and with Vodafone to co-ordinate the build activities to maximise efficiency and to reduce costs. Nominally each Relevant Access Seeker is responsible for sourcing and installing Relevant Access Seeker-specific equipment needs, including cabinets, feeder cables, antenna and brackets. Parties may however choose to use common suppliers of these installation activities.
- 6.2 Following the Grant Funded Site being Site Integrated, each Relevant Access Seeker may perform checks to ensure that there are no material interference issues at the Grant Funded Site. To the extent that there are any interference issues, each Relevant Access Seeker will be responsible for remedying such issues, as appropriate. Minor defects in the site build will be identified and remedied, and project closure documentation including the generation of "as built" plans will be produced and issued to the Relevant Access Seekers.
- 6.3 Once a Grant Funded Site becomes Site Integrated that site becomes a "Relevant Facility" as per the Mobile Co-location STD and the ongoing terms and conditions, future operation of the site will fall under the Mobile Co-location STD.

7 Co-location Pricing

- 7.1 "Co-location Costs" means Vodafone's costs directly incurred in maintaining the Grant Funded Site (including for the avoidance of doubt, associated infrastructure such as access tracks, fences, and landscaping) and includes site rental costs, break fix costs and planned preventative maintenance costs.
- 7.2 For each Grant Funded Site, the Co-location Costs will be shared equally between all Relevant Access Seekers (including Vodafone) in respect of that Grant Funded Site in the proportions set out below.
- 7.3 When calculating the number of Relevant Access Seekers on a Grant Funded Site a Small Access Seeker will count as half an Access Seeker. Small Access Seeker means an Access Seeker who meets the following criteria:
- 7.3.1 All equipment is located within the bottom 2/3 thirds of the height of the mast*;
 - 7.3.2 Monopoles: up to 5 antenna (of any type) on the mast, only 1 of which may be a parabolic dish antenna with a maximum diameter of 1.2m;
 - 7.3.3 Lattice: up to 5 antenna (of any type) on the mast, only 1 of which may be a parabolic dish antenna with a maximum diameter of 1.8m;
 - 7.3.4 <9 sqm equipment housing area e.g. shelter or cabinets; and
 - 7.3.5 Parabolic dish antenna dimensions are as per the manufacturers specifications, rounded up to the nearest .1m.

*Calculated on the height of the mast = Highest point of mast inclusive of antenna etc

- 7.4 An Access Seeker will not be classified as a Small Access Seeker if any of the above criteria in paragraph 7.3 above are not met.

PART D: RETAIL SERVICES

Vodafone will make available to potential Retail Customers:

- a service which provides the same functionality as the RBl Broadband Service; and
- a service which provides the same functionality as the RBl Broadband Plus Voice Service.

Appendix 1 Engineering Design Standards

Towers

Subject to obtaining any necessary resource consent and landowner authorisation, Vodafone will construct all Grant Funded Infrastructure:

- to a height, and of a structural strength, sufficient to enable co-location of:
 - at least two other Access Seekers (other than Vodafone) , across at least two upper levels of the Tower, and
 - at least three other Small Access Seekers (as defined in part C above) , at lower positions on the Tower provided that there may be restrictions on the amount of equipment a Small Access Seeker can install where other Small Access Seekers have already installed equipment.
- of a structural strength sufficient to enable the addition of a mast extension (and associated antennae) of up to 5 metres, except in cases of masts 30 metres and higher;
- with at least one carousel headframe or other appropriate headframe, at any of the upper levels of the Tower, irrespective of whether there is an Access Seeker that has confirmed that it wishes to receive the Collocation Services at the time of Tower design and resource consenting.

Except where the terrain or other exceptional factors render it unnecessary (such as in the case of some hilltops), a sufficient height will be interpreted to mean:

- where Vodafone co-locates on the same level as the XT network, at least 25 metres; and
- where Vodafone co-locates at a different level from the XT network, any height sufficient to enable the achievement of the RBI coverage and co-location objectives.

To avoid doubt, Vodafone will be free to construct Towers to a height exceeding 25 metres, subject to obtaining any necessary resource consent and landowner authorisation.

Once Grant Funded Infrastructure has been constructed as per the above and an Access Seeker wishes additional infrastructure to be built, e.g. a second headframe or a mast extension, then the Access Seeker concerned will bear all responsibility and expenses associated with:

- effecting and maintaining the co-location, including for the avoidance of doubt the cost of adding or retro-fitting headframes and/or mast extensions; and
- obtaining and renewing any necessary resource consent and/or landowner authorisation.

Design life

Network equipment will have a design life of 8 years. Physical infrastructure such as ducts, towers and building will have a design life of at least 25 years.

Power supplies

The solution is designed with 12 hours of battery back-up. All sites will have external connection for a community provided 230v ac generator.

Initial capacity

Community broadband systems must have sufficient capacity to enable Access Seekers to provide End User connections for 3 years post completion of each area.

The number of End users who may sign up for the Enhanced Broadband Service is limited to 15 at each cell site. Vodafone reserves the right to apply a fair use policy to the Enhanced Broadband Service.

WT reference installation

This is Vodafone's reference specification updated on 5 May 2016. Vodafone may update this from time to time and will update this Appendix accordingly. These are specifications for a reference installation and in some cases the actual installation may vary.

<p>External Antenna Specification</p> <p>-must meet each of these requirements</p> <p>Electrical Specifications</p> <ul style="list-style-type: none"> • Frequency Range (MHz) 900 ~960 • Gain(dBi) 15 ± 0.5 • VSWR ≤ 1.5 • Front-to-back Ratio (dB) > 16 • Impedance (Ω) 50 • Maximum Input Power (W) 100 <p>Mechanical Specifications</p> <ul style="list-style-type: none"> • Antenna Length (mm) 1400 • Antenna Weight (kg) 1 • Rated Wind Velocity (m/s) 60 • Operating Temperature (°C) -55 ~ 65 	<p>WT</p> <p>- must provide these features at a minimum:</p> <ul style="list-style-type: none"> • WCDMA/HSPA 2100/900MHz • GSM/GPRS/ /900/1800MHz • LTE 3GPP Band 3, 7, 28 • HSDPA 7.2Mbps/HSUPA 5.76Mbps (or faster) • LTE Category 4 service (or faster) • Voice service over GSM, WCDMA • WLAN:IEEE 802.11b/g • Ethernet:RJ45 port for 10/100Mbps Ethernet connection • Telephony: RJ11 port analogue phone connection • Able to support an Appropriate Aerial
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LTE

The radio equipment to be installed by Vodafone on the Grant funded Towers will be "LTE ready" in that it will be upgradeable to LTE.

Appendix 2 – Service Levels

<p>Priority 1</p>	<p>Priority given to an incident that has critical impact on the Access Seeker's business operations, including loss of revenue, corruption of data, or major failure in functionality in a live service/network</p> <p>Results in switching failure, multiple or cyclic restart/reload, congestion or degraded traffic handling capacity of 25% or greater, or loss of product or facility</p> <p>Examples:</p> <ul style="list-style-type: none"> A complete outage of any service Loss or severe degradation of inter-carrier exchange capability Isolation of a large geographical area a complete outage of a cell site or sites
<p>Priority 2</p>	<p>Priority given to a fault which substantially affects the Access Seeker's ability to conduct its business as a result of the failure of a key feature to perform as specified, resulting in substantial performance degradation, and/or inability to use a major feature of the network or service.</p> <p>Example:</p> <ul style="list-style-type: none"> • A significant number of wholesaler end customers are impacted/potentially impacted
<p>Priority 3</p>	<p>Priority given to a minor fault which does not substantially impair the functioning of the Wholesale service and does not significantly impact End Users, resulting in the inability of non-essential parts to perform to specifications.</p> <p>Examples:</p> <ul style="list-style-type: none"> Single wholesale end user faults Recurring incident with no customer impact that has the potential if left to become service impacting - errors on links.
<p>Priority 4</p>	<p>Priority given to an issue that only requires information or has no immediate impact on the solution functionality or service to customers.</p> <p>Examples</p> <ul style="list-style-type: none"> Fault has no measurable business impact Immediate attention is not required and problems identified can wait until business hours to be evaluated An acceptable workaround for a Priority 1 to Priority 3 Fault exists and has been implemented, but final Resolution must be made within Operate and Maintain Service level times Immediate attention is not required

Accessibility: The percentage of 3G Rel99 sessions which were set-up successfully (not congested).

Retainability: The percentage of 3G Rel99 sessions which were terminated successfully by user (not dropped).

Truck Roll Failure Rate

Truck Roll Failure Rate = $A/B * 100$

where:

A = the total number of unsuccessful installations (i.e despite an attempted installation the service is unable to be received) of Rural Telecommunications Services in each consecutive 3 month period

B = the total number of attempted installation of Rural Telecommunications Services at locations within the coverage areas shown on Vodafone Wholesale's website in that 3 month period .

If the Truck Roll Failure Rate exceeds 5% then Vodafone will conduct a review of its planning assumptions for the coverage and performance of the Rural Telecommunications Services, and advise the Ministry of the outcome of that review and any actions or changes it intends to take as a result of the review.

APPENDIX 2

Schedule 10

Wholesale Service Pricing

1. Definitions

1.1 Unless the context otherwise requires:

"4G RBI Broadband Service" has the meaning defined in Schedule 1;

"4G RBI Broadband plus Voice Service" has the meaning defined in Schedule 1;

"Enhanced RBI Broadband Service" has the meaning defined in Schedule 1;

"Initial Term" has the meaning given to it in clause 4.2(a) of this Agreement;

"Off Peak" means the hours of 12am to 6am every day;

"RBI Broadband Service" has the meaning defined in Schedule 1;

"RBI Broadband plus Voice Service" has the meaning defined in Schedule 1;

"Standard RBI Broadband Service" has the meaning defined in Schedule 1; and

"Standard RBI Broadband plus Voice Service" has the meaning defined in Schedule 1;

1.2 Unless otherwise provided in this Schedule, capitalised terms shall have the meaning given to them in clause 1 of this Agreement.

2. Pursuant to clause 8.7 of the Agreement this Schedule details the price Vodafone may charge for Wholesale Services it provides to Access Seekers during the Initial Term and any extension to the Initial Term agreed pursuant to clause 4.2(a).

3. The prices listed below are the maximum prices Vodafone may charge for the Wholesale Services subject to any direction of the Telecommunications Commissioner or the Commerce Commission pursuant to the Act. If Vodafone chooses to offer additional wholesale services to the Wholesale Services set out below (for example, by offering a different data cap per month) ("Additional Wholesale Services") then Vodafone may charge for those Additional Wholesale Services at its discretion. Vodafone acknowledges that the retail pricing requirements in clauses 6.21 to 6.30 of the Deed of Undertaking continue to apply.

Product	Maximum Price
Standard RBI Broadband Service	
Plan 30 GB on-peak, 50 GB off-peak per month	\$44.35

Overage rate per GB	\$1.50
4G RBI Broadband Service	
Plan 80 GB on-peak, 50 GB off-peak per month	\$54.01
Overage rate per GB	\$1.50

Standard RBI Broadband plus Voice Service	
Plan 30 GB on-peak, 50 GB off-peak per month	\$52.17
Overage rate per GB	\$1.50
4G RBI Broadband plus Voice Service	
Plan 80 GB on-peak, 50 GB off-peak per month	\$61.83
Overage rate per GB	\$1.50
Enhanced RBI Broadband Service per month	
	\$64.40

Unused capacity will not be carried forward for usage in future months.

4. Access Seekers must pay Vodafone for installation and rental of handover connections at the following prices:

	GigE	2Mbits (E1)
Monthly Rental charge per connection	\$212	\$360
New connection Installation Fee per connection	\$490	\$800

- The prices and rates set out in this schedule are exclusive of GST; and
 - may be amended by Vodafone to reflect any changes in the Producer Price Input Index (all industries) provided that Vodafone may not change the price more than once in any 12 month period and any change will not be greater than the % change in the Producer Price Input Index (all industries) over that same period.
5. The Ministry acknowledges that:

- the above pricing and rates reflect the Grant -which effectively subsidises pricing for the Wholesale Services and does not provide for full cost recovery for Vodafone;
- these below cost prices and rates are necessary to meet the Ministry's objectives for affordable rural broadband; and
- the Grant is a key element in allowing Vodafone to offer these rates and prices for the Wholesale Services.