

Chorus UFB Services Agreement
WSNB Dark Fibre Service: Service Description

Reference Offer
March 2022

Document Version History

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1 Interpretation

- 1.1 This Service Description is part of the Agreement as that term is defined in the Chorus Reference Offer.
- 1.2 The purpose of this Service Description is to detail the terms and conditions under which the WSNB Dark Fibre Service and the Standard UFB Services offered by the LFC will be supplied on the WSNB Fibre Link Route.
- 1.3 Standard UFB Services are available along the WSNB Fibre Link Route on the terms of the Chorus Reference Offer, subject to network availability as advised by Chorus from time to time and the following:
- 1.3.1 The Hyperfibre Service and the UFB Direct Fibre Access Service are not available along the WSNB Fibre Link Route;
 - 1.3.2 The UFB Bitstream 4 Service (but not the Enhanced Bitstream 4 Service) and the Chorus Regional Transport (CRT) Service, and any service that replaces the CRT Service, will be offered as Wholesale Backhaul Services on the WSNB Fibre Link Route, both on the terms of the Chorus Reference Offer;
 - 1.3.3 The UFB Central Office and POI Co-location Service is available only at the locations listed at Appendix D. Capacity at those locations is limited and will be allocated on a 'first come first served' basis.
- 1.4 For the purposes of this Service Description:
- 1.4.1 **Access Seeker** has the meaning given in Schedule 1 of the WSNB NIPA, as set out at Appendix E to this Service Description.
 - 1.4.2 **Associated Government Entity** means an entity that for the time being qualifies as an "Associated Government Entity" under Schedule 1 of the WSNB NIPA, as set out at Appendix E to this Service Description.
 - 1.4.3 **Chorus Reference Offer** means the Chorus UFB Services Agreement, as amended or replaced from time to time.
 - 1.4.4 **General Terms** has the meaning given in clause 1.3 of the Chorus Reference Offer.
 - 1.4.5 **Government Funded Programme** has the meaning given in Schedule 1 of the WSNB NIPA, as set out at Appendix E to this Service Description.
 - 1.4.6 **Government Programme Seeker** means an entity that for the time being qualifies as a "Government Programme Seeker" under Schedule 1 of the WSNB NIPA, as set out at Appendix E to this Service Description.
 - 1.4.7 **Standard UFB Services** means the Wholesale Services and Ancillary Services as those terms are defined in clause 1.3 of the Chorus Reference Offer that are available on the WSNB Fibre Link Route, subject to clause 1.3 above.
 - 1.4.8 **WSNB Fibre Link Route** means the fibre routes from Fox Glacier to Haast / Lake Hawea and from Te Anau to Milford which are the subject of the WSNB NIPA as identified in Appendix A to this Service Description, as updated from time to time by the parties to the WSNB NIPA.
 - 1.4.9 **WSNB Dark Fibre Service** means the dark fibre service offered to Access Seekers and Associated Government Entities on the WSNB Fibre Link Route on the terms set out in this Service Description.
 - 1.4.10 **WSNB NIPA** means the Network Infrastructure Project Agreement entered between Chorus Limited and Crown Infrastructure Partners Limited in relation to the Fox Glacier to Lake Hawea route dated 19 December 2019 and in relation to the Te Anau to Milford Sound route dated 22 July 2020, both as amended from time to time.

- 1.4.11 The definitions set out in the General Terms and the Operations Manual for Direct Fibre Access Services (layer 1) apply to this Service Description unless expressly provided otherwise. Terms used in this Service Description but not defined in the Chorus Reference Offer have the meaning given in Schedule One of the WSNB NIPA, as set out at Appendix E to this Service Description.
- 1.5 Except to the extent modified by this Service Description the following Chorus Reference Offer documents apply to the provision of the WSNB Dark Fibre Service:
- 1.5.1 General Terms;
- 1.5.2 Price List;
- 1.5.3 Direct Fibre Access Services - Service Level Terms; and
- 1.5.4 Direct Fibre Access Services – Operations Manual.
- 1.6 If there is any conflict or inconsistency between any of the Chorus Reference Offer documents that apply to the provision of the WSNB Dark Fibre Service, the order of precedence set out in clause 1.2 of the General Terms shall apply except that this Service Description shall have the highest precedence.

2 **Availability of WSNB Dark Fibre Service and application of General Terms**

- 2.1 The General Terms in the Chorus Reference Offer apply to the provision of the WSNB Dark Fibre Service subject to any modifications, exclusions and clarifications:
- 2.1.1 set out in this Service Description; and
- 2.1.2 that are necessary to ensure the General Terms are appropriate to the provision of the WSNB Dark Fibre Service as notified by the LFC on 40 Business Days' notice.
- 2.2 **Availability:**
- 2.2.1 If and for so long as required by the WSNB NIPA and subject to the number of dark fibres available for allocation to Access Seekers and Associated Government Entities, the WSNB Dark Fibre Service will be available to Access Seekers and Associated Government Entities for up to 25 years from the date on which provision of the WSNB Dark Fibre Service is required to commence on the relevant section of the WSNB Fibre Link Route under clause 2.1(b) of the WSNB NIPA (subject to any amendments of that provision which are approved by CIP), except that no agreement with an Access Seeker or Associated Government Entity in respect of the WSNB Dark Fibre Service is required to have a term that exceeds the term of the WSNB NIPA. An Access Seeker or Associated Government Entity wishing to confirm the date from which the WSNB Dark Fibre Service will be available on a relevant section of the WSNB Fibre Link Route should contact Chorus for an estimate of that date.
- 2.2.2 An entity seeking or receiving access to the WSNB Dark Fibre Service on terms or pricing reserved for Associated Government Entities must be approved by CIP or the Crown to be allocated dark fibres and is eligible for the WSNB Dark Fibre Service only if and for so long as:
- (a) the entity continues to be an Associated Government Entity; and
- (b) in the case of a Retail Service Provider or network operator qualifying as an Associated Government Entity only by virtue of being a Government Programme Seeker, only if and for so long as the Retail Service Provider or network operator uses the WSNB Dark Fibre Service solely for the purpose of continuing to operate infrastructure built as part of the Retail Service Provider or network operator fulfilling its obligations pursuant to a Government Funded Programme; and

- (c) it maintains a current registration with the Commerce Commission as one of the LFC's "non-retail users" such that the LFC is not prohibited by Law or any contract with CIP from supplying services to that entity, unless the LFC is satisfied (acting reasonably) that it would not breach any law or regulation, including without limitation any undertaking given by the LFC under Part 2A or Part 4AA of the Telecommunications Act 2001, by supplying the WSNB Dark Fibre Service to an Associated Government Entity.
- 2.2.3 At all times while an entity is receiving access to the WSNB Dark Fibre Service on terms or pricing reserved for Associated Government Entities, the entity warrants that it is meeting and will continue to meet the eligibility criteria set out in clause 2.2.2 that apply to that entity (the "eligibility warranty"). The entity acknowledges that a breach of this eligibility warranty could compromise the LFC's compliance with its non-discrimination obligations in Appendix 8 of the WSNB NIPA or the LFC's regulatory obligations deriving from the Telecommunications Act 2001.
- 2.2.4 If the LFC considers that an entity that is receiving access to the WSNB Dark Fibre Service on terms or pricing reserved for Associated Government Entities may be in breach of the eligibility warranty in clause 2.2.3 above:
 - (a) The entity will provide such information as is reasonably requested by the LFC to demonstrate whether the entity is complying with the eligibility warranty in clause 2.2.3.
 - (b) The entity will provide the information requested under clause 2.2.4(a) within 20 Business Days of the date of receipt of the LFC's request. If the LFC and the entity agree to extend the timeframe within which the entity will comply with a request under clause 2.2.4(a), the 99 day period set out in clause 7.4(a) of the General Terms will be extended by a period equal to the number of days by which the timeframe set out in clause 2.2.4(a) is extended.
- 2.2.5 If the entity that is receiving access to the WSNB Dark Fibre Service on terms or pricing reserved for Associated Government Entities fails to comply with the eligibility warranty in clause 2.2.3 or with clause 2.2.4, or if the LFC is not satisfied that the information provided under clause 2.2.4 demonstrates the entity's compliance with the eligibility warranty in clause 2.2.3, the LFC may, having consulted with CIP or the Commerce Commission:
 - (a) reprice the WSNB Dark Fibre Service being provided to the entity, in accordance with the pricing set out at clause 3.2 of this Service Description; and/or
 - (b) from the point at which the LFC reasonably believes that the entity ceased to comply with the eligibility warranty in clause 2.2.3, retrospectively adjust the price at which the WSNB Dark Fibre Service was provided to the entity, by way of an invoice or a credit in accordance with clause 7.5 of the General Terms for the differential between the price paid by the entity as an Associated Government Entity and the price which would have been paid by the entity as a Retail Service Provider or network operator that is not an Associated Government Entity, in accordance with the pricing set out at clause 3.2 of this Service Description; and/or
 - (c) if not satisfied that the entity has maintained a current registration with the Commerce Commission as one of the LFC's "non-retail users", terminate supply of the WSNB Dark Fibre Service with immediate effect.
- 2.2.6 If the LFC reprices the WSNB Dark Fibre Service in accordance with clause 2.2.5(a), the Retail Service Provider or network operator may terminate the associated Service Order by 20 Business Days' notice to the LFC, but in any case the Retail Service Provider or network operator will pay all additional amounts invoiced by the LFC pursuant to clause 2.2.5(b).

- 2.2.7 Clauses 7.4(b), 7.4(c), 7.6 and 7.7 of the General Terms do not apply in relation to the LFC's exercise of its rights or any actions or omissions by a Retail Service Provider or network operator under clauses 2.2.2 to 2.2.6 of this Service Description, except that, if a Retail Service Provider or network operator reasonably and in good faith believes that there is a manifest error solely in the calculation of any amounts invoiced or credited by the LFC pursuant to clause 2.2.5(b), the Retail Service Provider or network operator may give notice to the LFC in accordance with clause 7.6 of the General Terms and such manifest error shall be treated as an Invoice Error.
- 2.3 **End supply:**
- 2.3.1 Clause 5.2 of the General Terms does not apply to the WSNB Dark Fibre Service.
- 2.3.2 Subject to clause 2.3.3 the LFC may end the supply of the WSNB Dark Fibre Service if:
- (a) the WSNB Dark Fibre Service is no longer viable or the LFC is otherwise unable to continue to provide the WSNB Dark Fibre Service, by giving not less than 24 months' notice to the Access Seeker or Associated Government Entity; or
 - (b) the LFC decides, in its sole discretion, to withdraw the WSNB Dark Fibre Service from general availability and replace it with a new WSNB Dark Fibre Service, by giving not less than 12 months' notice to the Access Seeker or Associated Government Entity.
- 2.3.3 Unless permitted otherwise by the WSNB NIPA and subject to clause 2.6, the LFC may not end the supply of the WSNB Dark Fibre Service before 19 December 2044 unless the LFC provides a replacement service:
- (a) in accordance with the relevant requirements of the WSNB NIPA;
 - (b) that delivers at least the performance characteristics of the withdrawn WSNB Dark Fibre Service;
 - (c) with a price which is no greater than the price allowed by the WSNB NIPA for the withdrawn WSNB Dark Fibre Service.
- If the requirements of this clause 2.3.3 are satisfied and a replacement service is provided by the LFC then this clause will continue to apply to that replacement service.
- 2.3.4 Early termination charges will not apply if the LFC replaces the WSNB Dark Fibre Service under this clause 3.
- 2.4 **Notice of breach of Service Level:** If a breach of any of the Service Levels set out at clause 5.1 or 5.2 of this Service Description occurs, the LFC must:
- 2.4.1 promptly give the Access Seeker or Associated Government Entity notice to that effect; and
 - 2.4.2 take such steps to remedy and to report on the breach of the relevant Service Level as soon as possible.
- 2.5 **Service rebate:** Clause 6.5 of the General Terms does not apply to the WSNB Dark Fibre Service.
- 2.6 **Partial termination or variation:**
- 2.6.1 Clause 22.1(c) of the General Terms does not apply to the WSNB Dark Fibre Service.
 - 2.6.2 Notwithstanding anything in the Chorus Reference Offer, the LFC may partially terminate or vary (as applicable) this Service Description and any Service Order for the WSNB Dark Fibre Service where the LFC has been unable to provide all, or a substantial part of, the WSNB Dark Fibre Service in accordance with the Chorus Reference Offer and this Service Description as a result of the termination of all or part of the WSNB NIPA.

- 2.6.3 Where the LFC has been unable to provide all, or a substantial part of, the WSNB Dark Fibre Service in accordance with the Chorus Reference Offer and this Service Description as a result of the suspension of the performance by the LFC of any or all of the LFC's obligations under the WSNB NIPA the LFC may, immediately and without liability, suspend or restrict, but not partially terminate, the WSNB Dark Fibre Service to the extent, and for the period of time, that such suspension or restriction is in effect under the provisions of the WSNB NIPA.
- 2.6.4 If the LFC is entitled to suspend or partially terminate the Service Description and any Service Order for the WSNB Dark Fibre Service under clause 2.6.2 or 2.6.3 it will provide written notice of termination or suspension to the Access Seeker or Associated Government Entity (Notice of Partial Termination or Suspension) setting out:
- (a) the parts of the Service Description and/or any Service Order that are to be suspended or terminated;
 - (b) any amendments required to the Service Description and/or any Service Order; and
 - (c) the date of suspension or termination,
- and the Service Description and/or any Service Order will be varied, and the relevant parts of the Service Description and/or any Service Order suspended or terminated, on the date, and in the manner, specified in the Notice of Partial Termination or Suspension.
- 2.7 **For the avoidance of doubt:**
- 2.7.1 The WSNB Dark Fibre Service is not a Base Wholesale Service as defined in clause 1.3 of the General Terms.
- 2.7.2 No changes to the charges for the WSNB Dark Fibre Service shall be made other than in accordance with clause 3 below. Changes to any of the charges for the WSNB Dark Fibre Service in accordance with clause 3 below do not require the approval of CIP.
- 2.8 **Changing the Service Description:**
- 2.8.1 This Service Description may be changed by the LFC using the process for Agreement Changes set out in the General Terms except that:
- (a) the Change Management Forum's prior approval of any such proposed Agreement Change under clauses 24.1 and 25 of the General Terms is not required; and
 - (b) Access Seekers and Associated Government Entities may not propose any Agreement Change in relation to this Service Description in accordance with clause 24.1(b) of the General Terms.
- 2.9 **WSNB NIPA Consequential Changes:**
- 2.9.1 Subject to clause 2.9.2, the LFC may propose a change to this Service Description for the purpose of complying with any new or amended obligations of the LFC under the WSNB NIPA, which results directly from any change to the terms of the WSNB NIPA (**NIPA Change**), by notice to the Access Seeker or Associated Government Entity (**NIPA Consequential Change**).
- 2.9.2 The LFC must complete consultation in accordance with clause 24.8 of the General Terms in respect of any NIPA Consequential Change prior to the effective date of the NIPA Change and the LFC will use all reasonable endeavours to procure that CIP participates in that consultation process.

- 2.9.3 Subject to clause 2.9.2, and after the NIPA Consequential Change and the related NIPA Change have been approved by CIP in accordance with the requirements of the WSNB NIPA, the LFC may implement the NIPA Consequential Change by giving at least 60 Business Days' notice of implementation, provided that if the Access Seeker or Associated Government Entity requires additional time to make any consequent change to its procedures, facilities or systems it will notify the LFC. The time for those consequent changes will, to the extent required by the Access Seeker or Associated Government Entity, be extended:
- (a) automatically, for up to 20 Business Days; and
 - (b) at the discretion of the LFC, acting reasonably and in good faith, for a further 20 Business Days or such other period as agreed by the LFC and the Access Seeker or Associated Government Entity.
- 2.9.4 If the LFC considers (acting reasonably) that the NIPA Consequential Change is urgent:
- (a) it will submit the NIPA Consequential Change for approval by CIP in accordance with the requirements of the WSNB NIPA at the same time the NIPA Consequential Change is submitted for consultation in accordance with clause 24.8 of the General Terms;
 - (b) it may, subject to approval by CIP in accordance with the requirements of the WSNB NIPA, implement the NIPA Consequential Change: (i) by not less than 20 Business Days' prior notice; and (ii) before completing consultation in accordance with clause 24.8 of the General Terms, provided the LFC will continue consultation until the clause 24.8 process is completed; and
 - (c) it will promptly implement, in accordance with clause 2.9.3, any subsequent amendment to the NIPA Consequential Change approved by CIP in accordance with the requirements of the WSNB NIPA and in accordance with clause 24.8 of the General Terms.
- 2.10 **Price List**
- 2.11 The labour rates that will apply to the WSNB Dark Fibre Services are those rates set out in the Chorus Reference Offer Price List until 2022, when they will be replaced by the new rates which replace the UFB (Chorus Reference Offer) rates.
- 2.12 The following pricing principles and prices will apply to the WSNB Dark Fibre Service provided to Access Seekers:
- 2.12.1 The LFC will offer the WSNB Dark Fibre Service to Access Seekers on both a lease basis and on the basis of an up-front payment for a fixed term;
 - 2.12.2 An installation charge based on time and material cost to terminate fibre at a Specified Breakout Point and, if required, to extend fibre beyond a Specified Breakout Point;
 - 2.12.3 An O&M charge of \$3,312 per year per fibre (invoiced monthly in advance on a pro-rata basis); and
 - 2.12.4 For terms longer than one year, the O&M charge will be calculated on the basis of a DCF using an inflation rate of 1.5% pa and a cost of capital charge of 6.5% pa to provide an O&M charge per fibre for the term, that must be paid up-front.

The table below shows an example with a 10-year term using 2021 pricing:

WSNB Dark Fibre Service	1	2	3	4	5	6	7	8	9	10
Free Cashflow	\$3,312	\$3,362	\$3,412	\$3,464	\$3,516	\$3,568	\$3,622	\$3,676	\$3,731	\$3,787
Present Value of Cashflow	\$3,312	\$3,157	\$3,009	\$2,867	\$2,733	\$2,604	\$2,482	\$2,366	\$2,255	\$2,149
NPV (accumulated)	\$3,312	\$6,469	\$9,478	\$12,345	\$15,078	\$17,682	\$20,164	\$22,530	\$24,784	\$26,933
DCF Factor	1.00	0.94	0.88	0.83	0.78	0.73	0.69	0.64	0.60	0.57
Total NPV	\$26,933									

- 2.13 The LFC will offer the WSNB Dark Fibre Service to Associated Government Entities, priced as follows:
- 2.13.1 An installation charge based on time and material cost to terminate fibre at a Specified Breakout Point and, if required, to extend fibre beyond a Specified Breakout Point; and
- 2.13.2 No on-going charge apart from a Break-Fix charge based on time and material cost to restore service apportioned across affected in use fibres.
- 2.14 The LFC will offer additional breakout locations at a cost of \$20,819.
- 2.15 All of the above prices are the applicable prices for 2021-22 and may be adjusted annually on the 1st of July with Consumer Price Index increases in accordance with the applicable regulatory regime. For the avoidance of doubt, there will be no adjustment to charges levied under clause 3.3.2 above.

3 The WSNB Dark Fibre Service

- 3.1 The WSNB Dark Fibre Service is a dark fibre service suitable for the delivery of complex network applications requiring point-to-point fibre. It enables access to, and interconnection with the fibre network at Specified Breakout Points along the WSNB Fibre Link Route.
- 3.2 Additional Breakout Points on the WSNB Fibre Link Route can be provided at the price set out in clause 3.4 above with location subject to territorial authority approval.
- 3.3 A diagram of the configuration for the WSNB Dark Fibre Service is set out in Appendix B. The WSNB Dark Fibre Service consists of the provision of a single fibre from the connector or OFDF at one Specified Breakout Point on the WSNB Fibre Link Route to a connector or OFDF at another Specified Breakout Point on the WSNB Fibre Link Route.
- 3.4 The WSNB Dark Fibre Service is an input service which an Access Seeker or Associated Government Entity can use as a building block to combine with Standard UFB Services available on the WSNB Fibre Link Route (or with their own network or wholesale services provided by other service providers) to provide fibre based telecommunications services to End Users.
- 3.5 Nothing in this Service Description obliges the LFC to enter into any arrangements or take any action that would amount to a breach of any law or regulation, including without limitation any undertaking given by the LFC under Part 2A or Part 4AA of the Telecommunications Act 2001.

4 Service Level Terms

- 4.1 Clause 1 of Appendix 1 of the Direct Fibre Access Service – Service Level Terms does not apply to the provisioning of the WSNB Dark Fibre Service and is replaced with the following service levels, which shall be treated as Core Service Levels for the WSNB Dark Fibre Service:
- 4.1.1 New WSNB Dark Fibre Service connections at existing Breakout Points on the WSNB Fibre Link Route must be provided within 8 weeks of receiving a properly completed order and all necessary permissions and consents, or on such later date as agreed with the Access Seeker or Associated Government Entity.
 - 4.1.2 The addition of Standard UFB Service connections at existing Breakout Points on the WSNB Fibre Link Route must be provided within 8 weeks of receiving a properly completed order and all necessary permissions and consents, or on such later date as agreed. With process to gain any necessary consents to start within 2 weeks of an order being received.
 - 4.1.3 New WSNB Fibre Link Route Breakout Points on the WSNB Fibre Link Route must be provided within 8 weeks of receiving a properly completed order and all necessary permissions and consents, or on such later date as agreed with the Access Seeker or Associated Government Entity, as applicable. With process to gain any necessary consents to start within 2 weeks of an order being received.
- 4.2 Clause 2 of Appendix 1 of the Direct Fibre Access Service – Service Level Terms does not apply to the assurance of the WSNB Dark Fibre Service and is replaced with the following service levels, which shall be treated as Core Service Levels for the WSNB Dark Fibre Service:
- 4.2.1 All WSNB Dark Fibre Service connections fault reports must be acknowledged within 1 hour of receipt by the Network Operations Centre of the first fault communication.
 - 4.2.2 80% of all WSNB Dark Fibre Service connection outages must be restored within 48 hours and 100% within 72 hours, measured against receipt by the Network Operations Centre of the first fault communication and on a rolling 12 months basis, noting that restoration can be by way of a temporary repair.
- 4.3 Any time period:
- 4.3.1 during which any Force Majeure Event prevents installation of a Connection or prevents restoration of a Connection which is subject to Downtime; or
 - 4.3.2 during which the LFC is, due to a Force Majeure Event, unable to safely access any location or premises where physical access is required to install a Connection or restore a Connection which is subject to Downtime; or
 - 4.3.3 which reflects any minimum notice requirements or access constraints contained in any existing arrangements referred to in clause 12.2(b) of the General Terms and which contain the permissions or consents that are relied upon,
- will be added to the periods specified in clauses 5.1.1, 5.1.2 and 5.1.3 as applicable.
- 4.4 Appendix 2 of the Direct Fibre Access Service – Service Level Terms does not apply to the provisioning or assurance of the WSNB Dark Fibre Service and no Core Service Rebates will apply for WSNB Dark Fibre Service connections. However in the event of failure to satisfy the assurance service levels set out below, the following consequences will apply:
- 4.4.1 For failure to satisfy the Service Level in clause 5.1.1 for three consecutive months or four months in a twelve-month period, the LFC will prepare an urgent remediation plan and publish that plan to all Access Seekers, Associated Government Entities, CIP and the Minister of Telecommunications.
 - 4.4.2 For failure to satisfy the Service Levels in clauses 5.1.2 and 5.1.3 the LFC must provide a report on the reason for any failure to meet the Service Levels and any improvements made to the Design and Build services as a result, within 20 Business Days of such failure.
 - 4.4.3 For failure to satisfy the Service Levels in clauses 5.2.1 and 5.2.2 the LFC must provide a report on the damage or Fault incident, the reason for any failure to meet the Service Levels and any improvements made as a result, within 20 Business Days of such failure.

5 Implementation Activities

Installation services

- 5.1 Part 5, clause 12 of the Direct Fibre Access Service – Operations Manual does not apply to the installation of the WSNB Dark Fibre Service. The WSNB Dark Fibre Service includes a Standard Installation comprising the installation of a fibre bulkhead connector at the Specified Breakout Point on the WSNB Fibre Link Route. The LFC will provide Non-Standard Installations for the WSNB Dark Fibre Service as an ancillary service on a time and materials basis at the rates referred to in clause 3 of this Service Description.

Termination Point

- 5.2 The WSNB Dark Fibre Service termination points will be a fibre connector at the Specified Breakout Point on the WSNB Fibre Link Route.

Testing

- 5.3 The LFC will test the WSNB Dark Fibre Service between the termination points at the Specified Breakout Points to ensure the fibre is within the technical specification for fibre set out in Appendix C.
- 5.4 On request at time of order, the LFC will provide the Access Seeker or Associated Government Entity detailed fibre performance measurements between termination points at Specified Breakout Points in the form of a certificate generated from an Optical Time Domain Reflectometer (OTDR) trace. The LFC can also provide, at an additional charge in accordance with Price List item 1.12, Appendix 3, Manual line testing and site investigation, route maps for circuits and OTDR trace certificates after Connection.

Additional Services

- 5.5 If the Access Seeker or Associated Government Entity requires additional services such as:

- 5.5.1 a Non-Standard Installation which includes (where required):
- (a) an extension of the WSNB Dark Fibre Service where there is no existing fibre cabling to a point beyond the Specified Breakout Point; or
 - (b) installation of specialised termination equipment in the Specified Breakout Point;
- 5.5.2 any premises wiring services; or
- 5.5.3 installation and testing of Service Provider's equipment (as defined in the Central Office and POI Co-location Service Description) and services,

then the LFC may elect to provide the services in this clause 6.5 on request subject to terms to be agreed between the LFC and the Access Seeker or Associated Government Entity.

Service Requirements

- 5.6 To use the WSNB Dark Fibre Service, the Access Seeker or Associated Government Entity must have the capability to access and interconnect with the WSNB Dark Fibre Service, either by:
- 5.6.1 Running their own fibre cable to the termination point in the Specified Breakout Point; or
- 5.6.2 co-locating Service Provider's equipment (as defined in the Central Office and POI Co-location Service Description) at the LFC's relevant Central Office using a Footprint provided by the LFC under the Central Office and POI Co-location Service with a suitable environment and power supply. This service is only available on a first come first served basis at Fox Glacier, Haast township, Makarora and Te Anau in accordance with terms (including as to price) of the Central Office and POI Co-location Service and on a first come first served basis at Lake Hawea, Te Anau Downs and Milford Sound in accordance with terms similar to the SLU Co-location Service; or
- 5.6.3 Requesting the LFC to run a fibre cable from the termination point in the Specified Breakout Point to a point external to the Specified Breakout Point as a Non-Standard Installation.

Additional Service Characteristics

- 5.7 The technical specification of the WSNB Dark Fibre Service is set out in Appendix C.
- 5.8 The LFC will provide certain support and other assistance as part of the WSNB Dark Fibre Service including:
- 5.8.1 a manual facility for Service Requests; and
 - 5.8.2 an automated facility for fault notifications.
- 5.9 The loss of the optic path will be determined by the length of the fibre, the number of splices or connectors and the margin for future changes, the presence of legal intercept devices, ageing, etc. in accordance with the standards specified in Appendix C. The LFC will provide the Access Seeker or Associated Government Entity with network optical budget design targets at time of order and fibre commissioning power level test results after installation if requested. This information will be provided in good faith and the Access Seeker or Associated Government Entity will be responsible for the optical budgets used for each of their specific applications.
- 5.10 The WSNB Dark Fibre Service specifically excludes:
- 5.10.1 provision or maintenance of any cabling or connection or active device beyond the Service Demarcation Points described in clause 6.2;
 - 5.10.2 configuration, monitoring, operation, on-going support or maintenance of applications, equipment or networks of Access Seekers, Associated Government Entities or End Users; and
 - 5.10.3 the supply of AC mains & UPS power, accommodation space, heating, ventilation, air conditioning and facilities at the LFC's relevant Central Office or End User Premises, Service Provider Premises or NBAP (as applicable), except as allowed in clause 6.6.2.

6 LFC Service Demarcation Point

- 6.1 The Service Demarcation Point for the WSNB Dark Fibre Service is the termination point as described in clause 6.2.

7 Tie Cable Connection

- 7.1 Where required, the LFC will provide a Tie Cable in the form of a connectorised fibre pigtail between the Specified Breakout Point termination point and the LFC Co-location Service Footprint.

8 Responsibilities

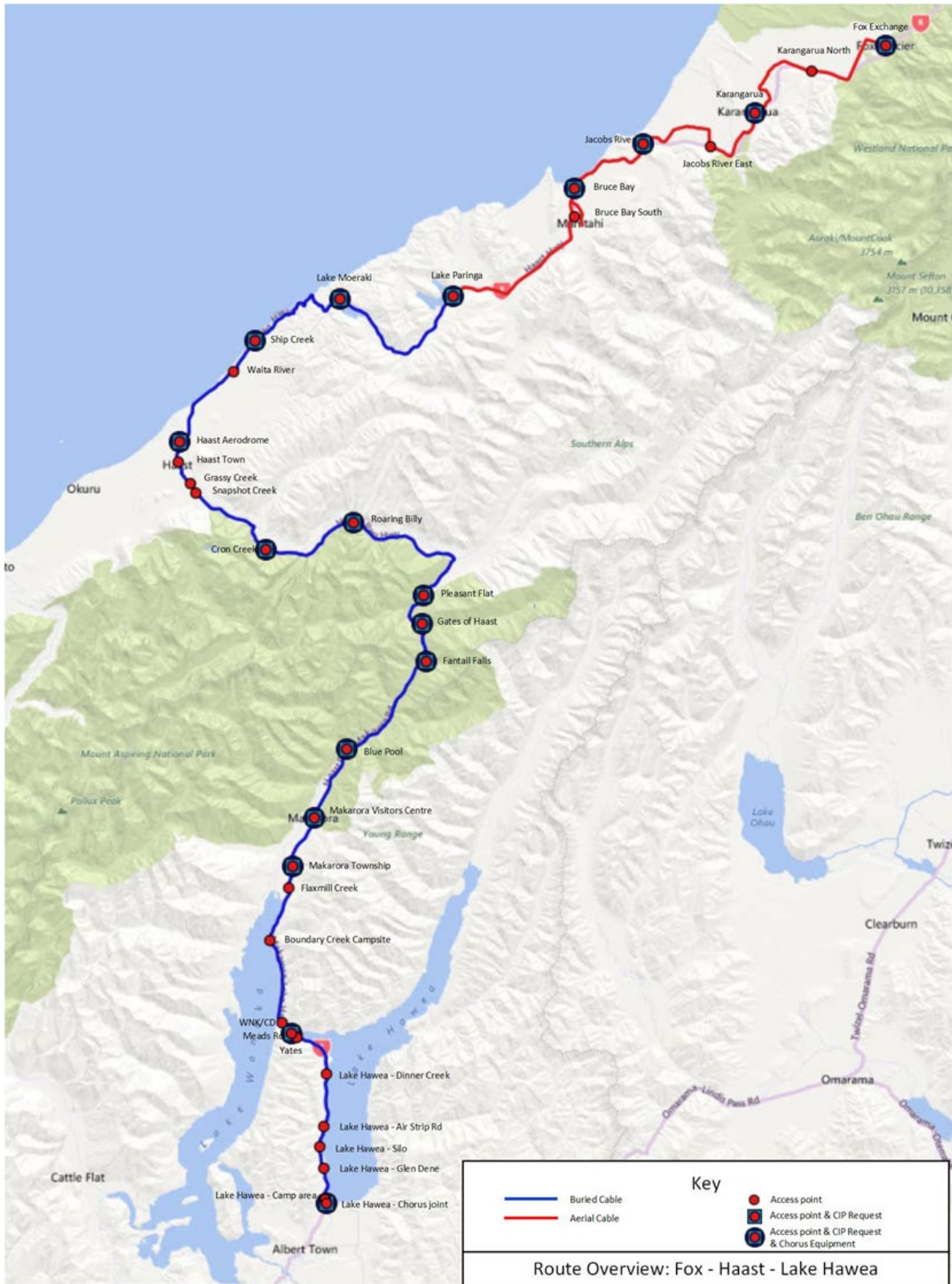
- 8.1 Other responsibilities of Service Providers are detailed in the General Terms and Operations Manual. These Service Provider responsibilities will also apply to Access Seekers and Associated Government Entities who are receiving access to the WSNB Dark Fibre Service, to the extent that those Service Provider responsibilities are relevant to the WSNB Dark Fibre Service.
- 8.2 The Access Seeker or Associated Government Entity will be responsible for all of the design, specification and commissioning of their equipment and plant (both active and passive) connected to the WSNB Dark Fibre Service.

9 Fibre Diversity

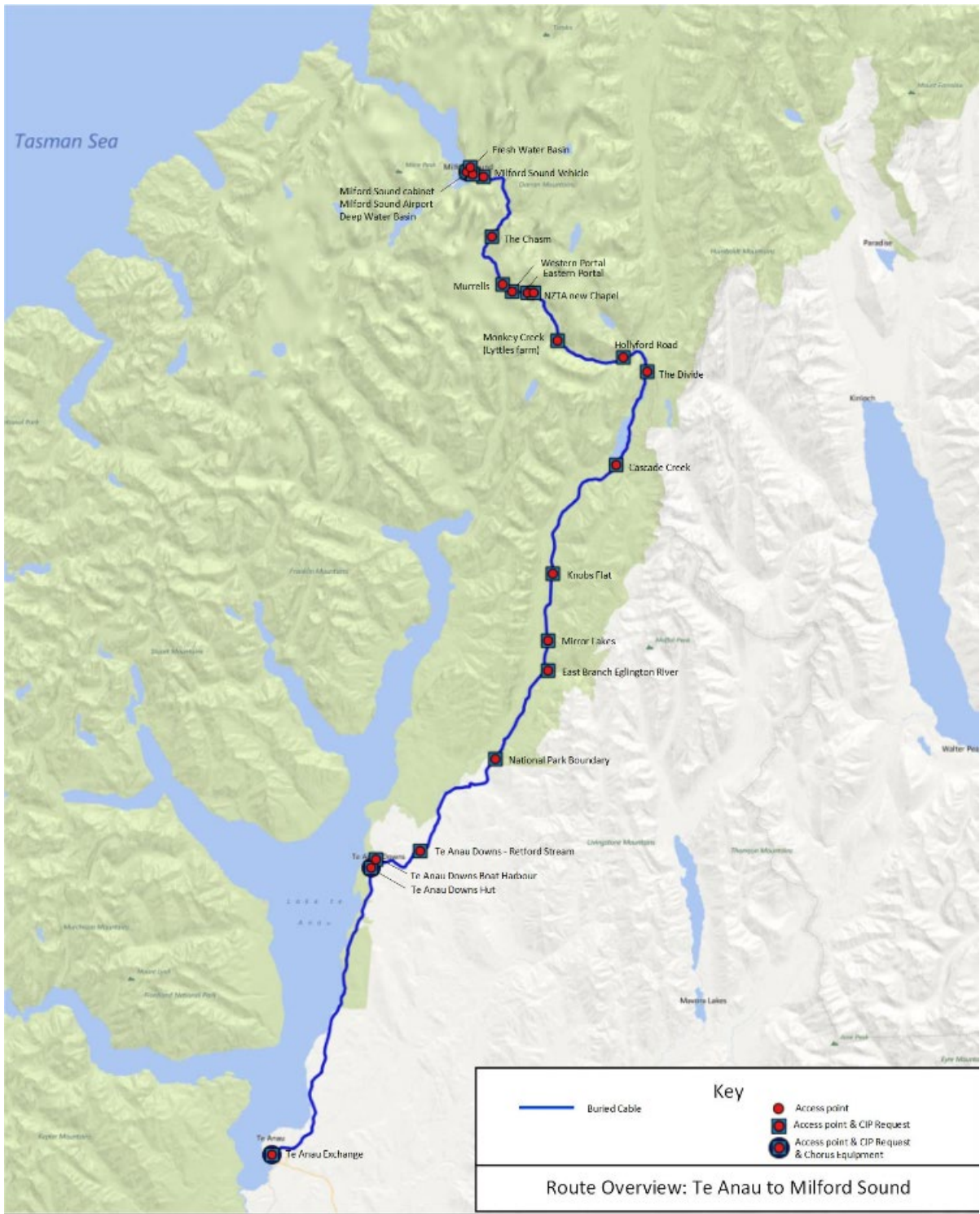
- 9.1 The WSNB Dark Fibre Service provides a single fibre between Specified Breakout Points on the WSNB Fibre Link Route.
- 9.2 If the Access Seeker or Associated Government Entity requires diversity they can order a second instance of the WSNB Dark Fibre Service however it will run in same sheath as the first instance and therefore will not provide protection against fibre cuts.

Appendix A - WSNB Fibre Link Route

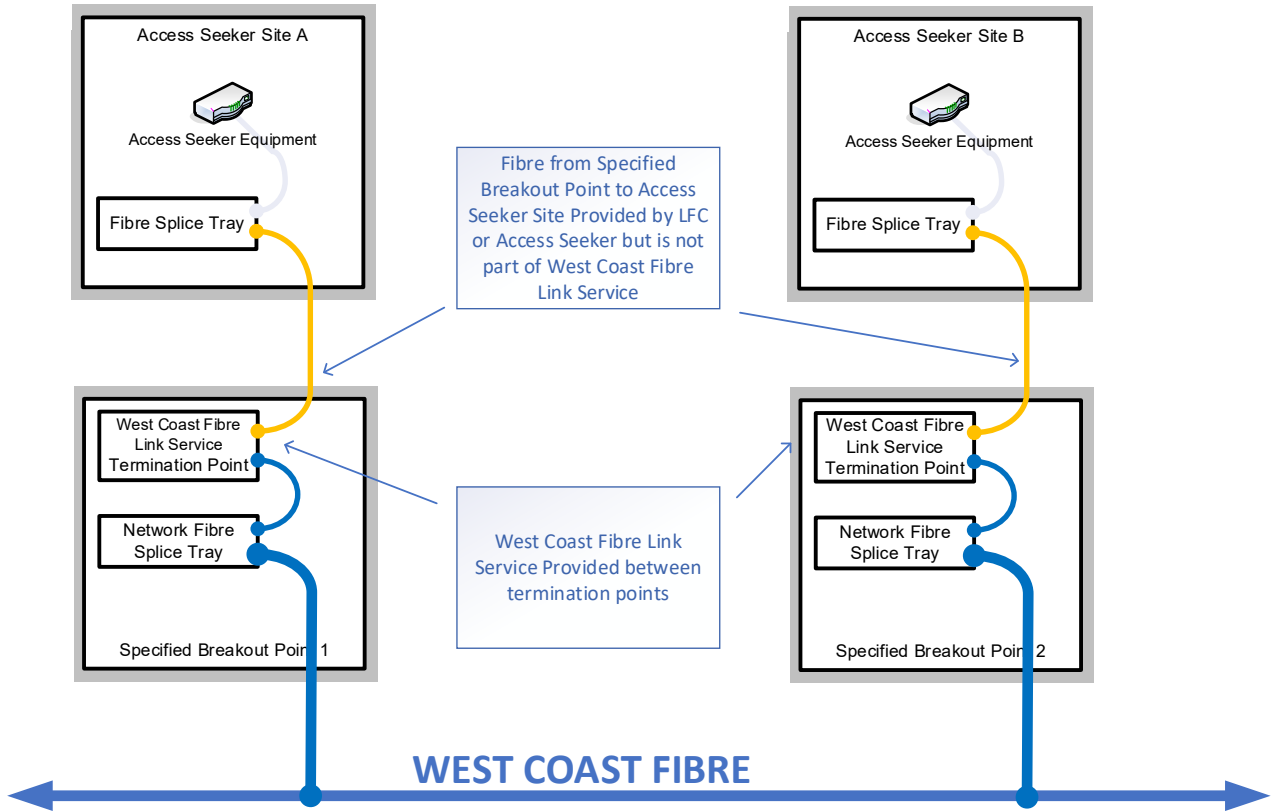
West Coast Fibre Link Route



Southland Fibre Link Route



Appendix B – Diagram of the configuration for the WSNB Dark Fibre Service



This is a generic diagram showing the standard configuration and Service Demarcation Points. It is not intended to represent every situation or detailed physical architecture and the LFC reserves the right to use or require other physical architecture. The following points should be noted:

- Some Specified Breakout Points have associated colocation space, see Appendix D;
- Extension of fibre beyond Termination Point is not part of service but can be provided as part of a Non-Standard Installation, as described in clause 6.5 of this Service Description.

Appendix C – Technical Specification**Technical Specification**

Fibre	External fibre must comply with ITU-T specification G.652D or 657A. Internal building fibre cables must meet appropriate fire regulations i.e. be Flame-Retardant, Non Corrosive, Low Smoke, Zero Halogen (FRNC/LSZH)
Connector Type	Fibre terminations must be SC/APC type connectors (complying with the IEC 61754-4 standard) or alternatively LC/APC also known as LCA type connectors (complying with the IEC 61754-20 standard) as appropriate.
Optic Path	Laser types and path characteristics expected to be designed to a minimum standard which is contained in either IEEE 802.3 Section 5 or ITU-T G.984 standards.
Fibre Testing Layer 1	All commissioning Layer 1 network testing (LFC site OFDF to end of Communal Network) is by OTDR at two wavelengths, 1310nm and 1550nm using Bi-Directional method in accordance with Chorus standard described in ND0556. Network test results are provided by agreement verifying performance features. Refer to the Direct Fibre Services Operations Manual for details. All Layer 1 network restoration testing will be LFC site OFDF to Premises termination point to the standard in Optical Performance table below. Testing for power loss will be at either 1310 or 1550 nm The wavelengths of 1625nm and 1650nm are reserved for network maintenance testing purposes (live GPON network), compliant with ITU-T L.41
Optical Path performance	Communal Network performance Network Return Loss = $\geq 32\text{db}$ Optical Fibre Attenuation Co-Efficient (L) (ITU-T G.652. & G657.A) = $\leq 0.4\text{db/km}$ Splice Loss (S) (average of all splices in link) = $\leq 0.15\text{db}$ Mated Connector loss (C) = $\leq 0.3\text{db}$ Mated Connector Reflection = $\geq 55\text{db}$ Total Insertion Loss of network (IL) is calculated from $IL = 0.4L + 0.15S + 0.3C$

Appendix D – Specified Breakout Points [to be updated with as built]

Link	Coordinates		Co-lo (Y/N)
	X	Y	
Fox Glacier (interconnection with existing fibre and fibre-based service)	1358807.152 m	5183212.798 m	Y
Gillespies Beach	2266777.145 m	5745384.503 m	N
Fox West	2260905.234 m	5741742.710 m	N
Karangarua	2254474.810 m	5736875.244 m	N
Jacobs River	2241745.515 m	5731512.665 m	N
Bruce Bay	2234781.606 m	5727773.450 m	N
Lake Paringa	2221825.108 m	5715151.819 m	N
Lake Moeraki	2209459.863 m	5714383.203 m	N
Proposed NGCC in-fill tower #1			N
Ship Creek	2200066.428 m	5709461.432 m	N
Haast area	2192081.903 m	5695431.459 m	Y
Cron Creek (Haast Pass)			N
Roaring Billy Falls			N
Proposed NGCC in-fill tower #2			N
Clarke's Bluff			N
Pleasant Flat Campsite			N
Gates of Haast			N
Fantail Falls			N
Blue Pool			N
			N
Makarora - Visitor centre – campsite			Y
Makarora - Township	1296878.813 m	5090143.399 m	N
The Neck			N
Lake Hawea (interconnection with existing fibre and fibre-based service)	1302251.190 m	5053455.439 m	Y

Link	Coordinates		Co-lo (Y/N)
	X	Y	
Te Anau Exchange (interconnection with existing fibre and fibre-based service)	2096623.096m	5519199.539m	Y
Te Anau Downs	2103421.670m	5543707.209m	Y
Te Anau Downs Boat Harbour	2103784.783m	5544419.290m	N
Te Anau Downs - Retford Stream	2107413.558m	1 2107413.55	N
National Park Boundary	2113266.801m	5553437.456m	N
East Branch of Eglington River	2117210.253m	5561112.174m	N
Mirror Lakes	2117060.918m	5563623.250m	N
Knobs Flat	2117129.481m	5569294.852m	N
Cascade Creek	2121867.477m	5578742.528m	N
The Divide	2124058.167m	5586696.890m	N
Hollyford Rd	2121989.515m	5587821.513m	N
Monkey Creek (Lyttles Farm)	2116347.542m	5588873.760m	N
NZTA "new Chapel"	2114020.379m	5592784.544m	N
Eastern Portal	2113530.339m	5592732.221m	N
Western Portal	2112272.859m	5592816.912m	N
Murrels	2111441.446m	5593319.307m	N
The Chasm	2110240.666m	1 2110240.66	N
Milford Sound Vehicle Monitoring	2109216.906m	5602251.183m	N
Deepwater Basin	2108264.561m	5602398.048m	N
Milford Sound Airport	2107775.477m	5602592.276m	N
Milford Sound Building	2107867.500m	5602653.383m	Y
Freshwater Basin	2107959.962m	5603107.703m	N

Appendix E – Schedule 1 to the WSNB NIPA

In this Appendix E, references to clauses, Schedules or Appendices are references to clauses, Schedules or Appendices of the WSNB NIPA.

Access Seeker means a Retail Service Provider or network operator who seeks access to any Services but for the purposes of:

- (a) clause 6.7 (Open Access Undertakings) and Appendix 8 (Open Access Undertakings);
- (b) Schedule 4 (Services),

does not include any Government Programme Seeker;

Associated Government Entity means any government, or any governmental or semi-governmental, entity, person or authority, body politic (but excluding any political party), governmental department, local government authority or statutory authority and includes (unless the context otherwise requires) CIP, MBIE and for the purposes of:

- (a) clause 15.4 (Direct loss or damage);
- (b) clause 6.6 (Open Access Undertakings) and Appendix 8 (Open Access Undertakings); and
- (c) Schedule 4 (Services),

includes any Government Programme Seeker. However, any such entity will be treated as an Associated Government Entity only if and for so long as that entity maintains a current registration with the Commerce Commission as one of the Company's "non-retail users", such that the Company is not prohibited by Law or any contract with CIP from supplying Services to that entity;

Base Agreement means clauses 1 to 24 (inclusive) of the WSNB NIPA;

Breakout Points means a location on the fibre cable where a pit is installed to allow connection of third party fibres to individual WSNB fibers;

Break-Fix Costs means all costs directly incurred in repairing a fault on the Grant Funded Network Section after it has been completed and is providing Services;

Build means all activities, services, functions and duties of the Company required to deliver the Grant Funded Network in accordance with the requirements in this Agreement, including the requirements in Schedule 2 (Design and Build) and **Building** has the corresponding meaning;

CIP means Crown Infrastructure Partners Limited, a registered limited liability New Zealand company, with company number 2346751 (or its nominees, assignees or successors);

Dark Fibre Services means the unlit fibres on the Grant Funded Network between the Specified Break Out Points at Fox Glacier and Lake Hawea as described in appendix 6 that are made available to Access Seekers and Associated Government Entities.

End User has the meaning given to it as set out in the Telecommunications Act 2001;

Government Funded Programme means the UFBI, RBI and MBS, including any extension of UFBI, RBI or MBS, and any new programme operated or overseen by any Associated Government Entity (excluding Government Funded Programme Seekers) in relation to the roll out of any Ultra-Fast Broadband / Telecommunication Services after the date of the WSNB NIPA;

Government Programme Seeker means a Retail Service Provider or network operator who seeks access to any Services solely for the purposes of continuing to operate infrastructure built as part of that Retail Service Provider or network operator fulfilling its obligations pursuant to a Government Funded Programme;

Grant Funded Infrastructure means any infrastructure that has received, or will receive (as the context requires) Grant Funding in accordance with this Agreement and forms or will form (as the context requires) part of the Grant Funded Network;

Grant Funded Network means the Grant Funded Infrastructure and all infrastructure that collectively forms a network along the WC Fibre Link Route to allow the Company to deliver:

- (a) the Wholesale Backhaul Services; and
- (b) the Dark Fibre Services,

to Access Seekers and Associated Government Entities;

Grant Funded Network Section means each section of the Grant Funded Network as identified in Appendix 6 (WC Fibre Link Route) and numbered according to the first column of the table in Appendix 1 (Build Schedule);

Grant Funding means the grant funding to be provided by CIP to the Company to fund all or part of the Build by the Company of the Grant Funded Network along the WC Fibre Link Route in accordance with this Agreement;

Law means:

- (a) any statute, regulation, by law, ordinance or subordinate legislation in force from time to time to which a party is subject;
- (b) the common law and the law of equity as applicable to the parties from time to time;
- (c) any binding court order, judgment or decree;
- (d) any applicable industry code, policy or standard enforceable by law; or
- (e) any applicable direction, policy, permission, consent, licence rule or order that is binding on a party and that is made or given by any governmental, legal or regulatory body having jurisdiction over a party or any of that party's assets, resources or business,

in any jurisdiction that is applicable to this Agreement, including all applicable district or regional plans, district council bylaws, district council codes of practice and development manuals for roading and New Zealand Transport Agency guidelines and standards and includes The National Code of Practice for Utility Operators' Access to Transport Corridors dated 15 July 2019 and as amended from time to time;

Layer 2 Services means the services set out in clause 2.1(a) of Appendix 7 (Price List) but excluding clause 2.1(a)(vi) UFB Central Office and POI Co-location and clause 2.1(a)(vii) UFB Direct Fibre Access;

MBIE means the Ministry of Business, Innovation and Employment;

Mobile Black Spot Initiative or MBI means the Government's programme to develop enhanced availability of mobile services in as many Mobile Black Spot Zones as possible, to support safety on state highways and to enhance visitor experiences at key tourist destinations, with the support of Crown grant funding;

Personnel includes employees, agents, officers and individual independent contractors;

Retail Service Provider or RSP means an entity that has a contractual relationship with the Company for use of all or part of the Network and that has, or is to have, a contractual relationship with End Users for the provision of Telecommunications Services;

Rural Broadband Initiative or RBI means the Government's programme to develop enhanced broadband infrastructure in non-urban areas of New Zealand with the support of Crown grant funding;

Services means the following services that the Company must offer Access Seekers and Associated Government Entities in accordance with Schedule 4 (Services) and Schedule 5 (Services Levels):

- (a) Wholesale Backhaul Services;
- (b) Dark Fibre Services;
- (c) Layer 2 Services;

Specified Breakout Points has the meaning given in clause 4.3(a) of Schedule 2 (Design and Build);

Subcontractor means any person to whom the Company has subcontracted any part of its obligations under this Agreement or who is a supplier to the Company in respect of this Agreement and includes the Personnel and subcontractors of that person and **Subcontracts** and **Subcontracting** and like terms will be construed accordingly;

Telecommunication Service means a telecommunications service as defined in the Telecommunications Act;

Telecommunications Act means the Telecommunications Act 2001;

Third Party Event means any act or omission of a third party (including CIP, an Access Seeker or Associated Government Entity), except to the extent that such act or omission has been caused or contributed by:

- (a) any Subcontractor, any supplier of the Company or any person within the control or under the responsibility of the Company (whether through contract or otherwise);
- (b) any act or omission of the Company or its Personnel (including a failure of the Company to perform its obligations under this Agreement); or
- (c) any act or omission of the Third Party that has received the Company's prior written approval,

and shall also exclude any:

- (d) Force Majeure Event;

Ultra-Fast Broadband Initiative or UFBI means the Government's programme to develop Ultra-Fast Broadband across New Zealand;

Ultra-Fast Broadband means a fibre to the premises network that can provide an uncontended bandwidth of 100Mbps downstream and 50Mbps upstream to every End User and is capable of upgrades to at least speeds of 1Gbps downstream and 500Mbps upstream for mass market End Users and up to speeds of 10Gbps symmetrical to business, school and hospital End Users;

WC Fibre Link Route has the meaning given in Recital A of the Background of the Base Agreement;

Wholesale Backhaul Services means the services described in clause 2 of Schedule 4 (Services).