

# Tuatahi First Fibre Services Agreement

Service Description

Input Direct Fibre Access

Version 1.0.1

# Contents

---

|  |                                       |          |
|--|---------------------------------------|----------|
| <b>Input Direct Fibre Access Service (iDFAS)</b> |                                       | <b>3</b> |
| 1  | Interpretation                        | 3        |
| 2  | General Terms                         | 3        |
| 3  | The Input Direct Fibre Access Service | 3        |
| 4  | iDFAS Implementation Activities       | 4        |
| 5  | Service Demarcation Point at Premises | 5        |
| 6  | LFC Service Demarcation Point         | 5        |
| 7  | Access Seeker Responsibilities        | 5        |
| 8  | Fibre Diversity                       | 6        |
| 9  | Service Levels                        | 6        |

---

|                             |  |          |
|-----------------------------|--|----------|
| <b>Appendix A – Diagram</b> |  | <b>7</b> |
|-----------------------------|--|----------|

---

|   |  |          |
|---|--|----------|
| <b>Appendix B – Technical Specification</b> |  | <b>8</b> |
|---|--|----------|

# Input Direct Fibre Access Service (iDFAS)

## 1 Interpretation

---

- 1.1 The Input Direct Fibre Access Service (iDFAS) described in this Service Description will be available from 1 January 2020.
- 1.2 References to clauses or sections are references to clauses or sections in this Service Description unless expressly provided otherwise. The definitions set out in Wholesale Services Agreement General Terms (General Terms) and the Operations Manual apply to this Service Description unless expressly provided otherwise.
- 1.3 References to the Operations Manual are references to the operations manual for the iDFAS.

## 2 General Terms

---

- 2.1 The terms in this Service Description apply to provision of iDFAS subject to any modifications, exclusions and clarifications:
  - 2.1.1 set out in clause 2.2 below; and
  - 2.1.2 that are necessary to ensure the General Terms are appropriate to the provision of iDFAS, as notified by the LFC on not less than 40 Business Days' prior written notice to Access Seekers.
- 2.2 iDFAS:
  - 2.2.1 is not a Base Wholesale Service as defined in clause 1.3 of the LFC's UFB Wholesale Services Agreement General Terms;
  - 2.2.2 is not subject to a UFB Price Cap; and
  - 2.2.3 changes to iDFAS Charges and iDFAS Ancillary Charges may be made by the LFC on not less than 30 Business Days' prior written notice to Access Seekers.
- 2.3 This Service Description and the iDFAS Operations Manual and iDFAS Service Level Terms may be changed by the LFC using the process for set out in clause 24 of the General Terms.

## 3 The Input Direct Fibre Access Service

---

- 3.1 The iDFAS is a dark fibre service suitable for the delivery of consumer and business grade applications requiring point-to-point fibre access. It enables access to, and interconnection with the LFC Network.
- 3.2 A diagram of the configuration for the iDFAS is set out in Appendix A. The iDFAS consists of the provision of a single fibre from the connector or OFDF at the Premises or, in the case of an MDU the End User's Tenancy, to the MOFDF at the LFC Central Office.
- 3.3 The Input Direct Fibre Access Service is supplied by the LFC in compliance with the equivalence of input (EOI) standard in the Undertakings and using the EOI fibre at the Premises. If the EOI fibre has been consumed, then only a commercial DFAS services offering from the LFC will be available to the Access Seeker to order.

## 4 iDFAS Implementation Activities

---

### Interconnection Requirements

- 4.1** The Access Seeker can access and interconnect to the iDFAS by co-locating Access Seeker equipment (as defined in the Input Central Office and POI Co location Service Description or Central Office and POI Co location Service Description) at the LFC's relevant Central Office using a Footprint and associated tie cable provided under either the:
- 4.1.1 Input Central Office and POI Co-location Service; or
  - 4.1.2 Central Office and POI Co-location Service.

### Geographic Availability

- 4.2** iDFAS is available at Premises within UFB1 Areas and may (at the LFC's discretion) be made available by the LFC in adjacent UFB1 Greenfield areas as advised by the LFC from time to time, and otherwise as defined in the Operations Manual. For the avoidance of doubt, and in accordance with the Undertakings, iDFAS is not available:
- 4.2.1 to NBAPs;
  - 4.2.2 in any of the LFC's UFB2 and UFB2+ Candidate Areas, and any Greenfield areas adjacent to the LFC's UFB2 and UFB2+ Candidate Areas; and
  - 4.2.3 in any other UFB areas where LFC fibre is available outside of the LFC's UFB1, UFB2 and UFB2+ Coverage Areas and their respective adjacent Greenfields.

For the avoidance of any doubt, Greenfields means the subdivision in a UFB1 Coverage Area of a defined geographical site located in a private or public property subdivision, complex or community (evidenced by confirmation that the Premises exist in the LINZ title database) that is passed by the LFC's layer 1 communal infrastructure Network.

### Testing

- 4.3** The LFC will test the iDFAS service from the termination point at the Central Office to the termination point at the Premises, as referred to in clause 5.1, to ensure the iDFAS service is within the technical specification for fibre set out in Appendix B.

### Additional Service Characteristics

- 4.4** The technical specification of the iDFAS is set out in Appendix B.
- 4.5** The LFC will provide certain support and other assistance as part of the iDFAS including:
- 4.5.1 an automated facility for Service Requests;
  - 4.5.2 an automated facility for fault notifications; and
  - 4.5.3 a tool to assist the Access Seeker in determining the location and availability of the iDFAS (pre-qualification).
- 4.6** The LFC will provide the Access Seeker with network optical budget design targets and fibre commissioning power level test results. This information will be provided in good faith and the Access Seeker will be responsible for the optical budgets used for each of their specific applications.
- 4.7** Where applicable, the LFC will provide the Access Seeker with facilities to make fibre performance measurements from the OFDF in the originating LFC Central Office to nominated termination points at Premises. The LFC will provide staff to access the OFDF and connect the test equipment to the fibre(s) for such tests by the Access Seeker. An additional charge will be payable for these services.

- 4.8** iDFAS excludes:
- 4.8.1 provision or maintenance of any cabling or connection or active device beyond the service demarcation points described in clauses 5.1 and 6.1;
  - 4.8.2 configuration, monitoring, operation, on-going support or maintenance of Access Seekers' or End Users' applications, equipment or networks;
  - 4.8.3 the supply of AC mains & UPS power, accommodation space, heating, ventilation, air conditioning and facilities at the LFC's relevant Central Office or Premises;
  - 4.8.4 the connection of an iDFAS to services other than the Input Central Office and POI Co-location Service or Central Office and POI Co-location Service, including but not limited to:
    - (a) Direct Fibre Access Services;
    - (b) Fibre Interconnection Services;
    - (c) Third Party Tie Cables;
    - (d) LFC Tie Cables that terminate on Chorus ODFs; and
    - (e) a second instance of an iDFAS;
  - 4.8.5 the provisioning of iDFAS to a NBAP;
  - 4.8.6 the provisioning of iDFAS in any of the LFC's UFB2/2+ Candidate Areas and Greenfield areas adjacent to the LFC's UFB2/2+ Candidate Areas until 1 January 2026; and
  - 4.8.7 the provisioning of iDFAS in any other UFB areas which are outside of the LFC's UFB1, UFB2 and UFB2+ Candidate Areas.

## **5 Service Demarcation Point at Premises**

---

- 5.1 The Service Demarcation Point for the iDFAS at the Premises is the termination point on the ITP as described in the Operations Manual, and iDFAS excludes the Premises wiring.
- 5.2 If a iDFAS fault reported by the Access Seeker is found by the LFC to not be caused by the LFC or on any part of the LFC Network up to the iDFAS Service Demarcation Point, the Access Seeker may be charged the "No fault found" Charge in the Price List.

## **6 LFC Service Demarcation Point**

---

- 6.1 The iDFAS Service Demarcation Point at the Central Office is the termination point on the OFDF in the Central Office.
- 6.2 For clarity, the Fibre Interconnection Patch Service is not required to interconnect the iDFAS to the tie cable provided in conjunction with the Input Central Office and POI Co-location Service or Central Office and POI Co-location Service.

## **7 Access Seeker Responsibilities**

---

- 7.1 Other Access Seeker responsibilities are detailed in the General Terms and Operations Manual.

- 7.2** The Access Seeker will be responsible for all of the design, specification and commissioning of its equipment and plant (both active and passive) connected to the iDFAS.

## **8 Fibre Diversity**

---

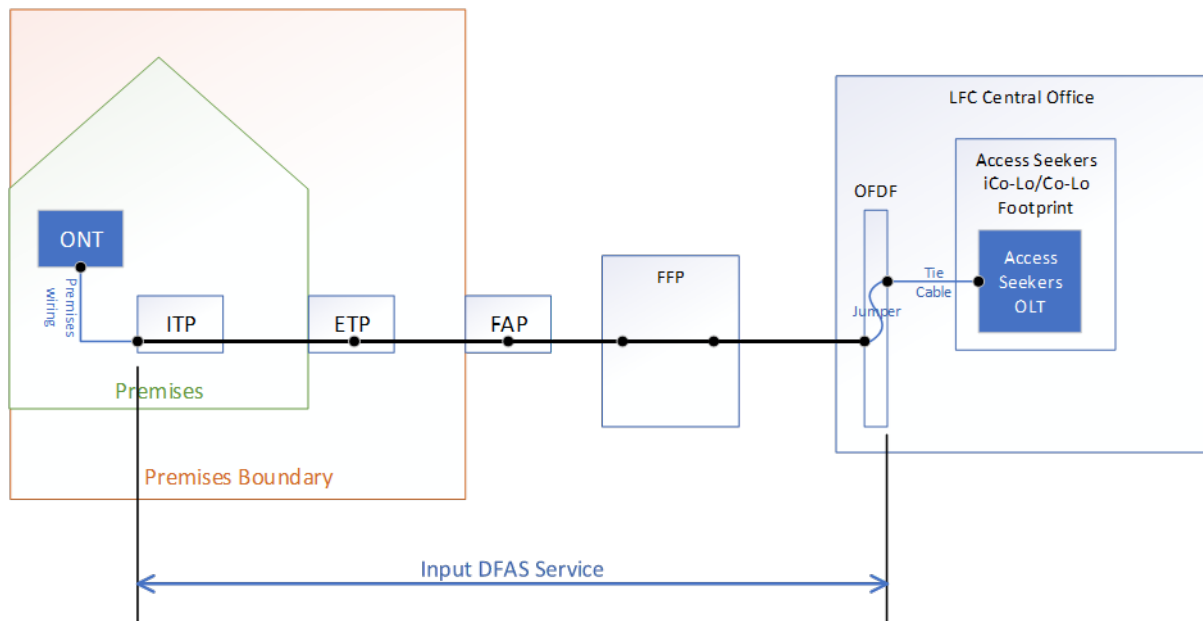
- 8.1** The iDFAS provides a single fibre between the LFC's relevant Central Office and the Premises.
- 8.2** Diversity (a second or subsequent instance of the iDFAS between the Premises and the LFC's relevant Central Office) will be available to Priority Users on request for Premises located in major health-care facilities, secondary or tertiary education centres, central business districts, industrial parks, business parks and strip malls. Diversity, as a standard product, may not be available to Premises outside of these areas. Standard installation Service Levels do not apply to the provision of diverse products and each instance will be treated as an individual line for the purpose of availability of Service Levels.
- 8.3** Where available, the diverse optical paths will be in separate fibre cable sheaths, and if requested, in separate cable routes. The diverse cable routes will be a minimum of the width of a street apart and should not share any manholes or access points. Separate entries into the LFC's relevant Central Office will be used where available.
- 8.4** The Access Seeker can also request diverse access to Premises, or access to diverse Central Offices as part of a Non-Standard Install; however this may not be available in all cases.
- 8.5** Where practicable, the LFC will also provide diversity in situations other than those listed in clause 8.2, on request, as an additional service.
- 8.6** There may be practical limitations to providing full physical diversity to some sites. The provision of a separate entry to an LFC Central Office will have unique site specific engineering considerations and may attract additional costs.

## **9 Service Levels**

---

- 9.1** Service Levels for the iDFAS are set out in the Service Level Terms for the iDFAS.

# Appendix A – Diagram



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. The following points should be noted:

- not all circuits will pass through a cabinet or FFP;
- the circuit will terminate within a 10m radius of ETP (unless otherwise arranged by Non Standard Install); and
- in MDUs where the LFC has provided Premises fibre cabling, the demarcation point is the ETP in an End User Tenancy.

# Appendix B – Technical Specification

## Technical Specification

|                       | Technical Specification  |
|-----------------------|--|
| <b>Fibre</b>          | External fibre must comply with ITU-T specification G.652D.<br>Internal building fibres may comply with ITU-T G.657A but cable must meet appropriate fire regulations i.e. be Flame-Retardant, Non Corrosive, Low Smoke, No Halogen (FRNC/LSNH).   |
| <b>Connector Type</b> | 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.   |
| <b>Optic Path</b>     | Laser types and path characteristics expected to be designed to a minimum standard which are contained in the documents in LFC document ND0473 based on IEEE 802.3 Section 5 standard or ITU-T G.984.  |
| <b>Fibre Testing</b>  | <p>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 LFC standard.</p> <p>The methodology used will be based on bi-directionally testing all fibres in the Communal Network required to complete the service.</p> <p>Network test results are provided by agreement verifying performance features. Refer to the Direct Fibre Services Operations Manual for details.</p> <p>All Layer 1 Network restoration testing will be LFC site OFDF to Premises termination point.</p> <p>Testing for power loss will be at either 1310 or 1550 nm.</p> <p>The wavelengths of 1625 nm and 1650nm are reserved for Network maintenance testing purposes, (live GPON Network) compliant with ITU-T L.41.</p> |