WHOLESALE DSL ACCESS - LAYER 2
SERVICE SCHEDULE

1. DEFINITIONS

1.1. Defined terms in the Standard Terms and Conditions have the same meaning in this Service Schedule unless expressed to the contrary. In this Service Schedule, unless the context otherwise requires:

DSL mean digital subscriber line transmission technology over copper.

Customer means the Customer described in the Service Order and any of its employees, sub-contractors, agents and representatives.

End Users means a customer of the Customer.

Standard Terms and Conditions means the standard terms and conditions between Vocus and the Customer governing the general terms and conditions on which Services are provided under this Service Schedule and any applicable Service Order from time to time, available at http://www.vocus.com.au/legal-contracts.

Vocus SLA means the Vocus service level agreement which can be found at http://www.vocus.com.au/legal-contracts, as updated from time to time.

2. THE SERVICE

2.1. This Service Schedule is for the supply of the Layer 2 Wholesale DSL Access Network service (**Service**) between the Customer's network and End User premises locations within Australia.

2.2. The Service consists of two major components:

(a) DSL tail circuits, connecting End Users premises to the Vocus network (**DSL Tail Circuits**); and

(b) DSL aggregation circuits, connecting the combined traffic of several DSL Tail Circuits to the Customer's network (**AGVC**).

2.3. This Service Schedule will apply to the first and any subsequent Service Orders for any components executed by the Customer and Vocus, this includes ordering, modification or cancelling individual DSL Tail Circuit transactions carried out via the "Vocus Members Portal" or Vocus B2B API.

3. PREREQUISITES TO SUPPLY OF THE SERVICE

3.1. A minimum of one AGVC must be ordered in the first Service Order.

4. SERVICE DESCRIPTION – DSL AGGREGATION CIRCUIT (AGVC)

4.1. The AGVC represents the Vocus' core network resources used to backhaul the traffic from the Customer's End Users to the Customer's network.

4.2. AGVC can be purchased as state or national aggregation.

(a) State aggregation interconnects are available in Sydney, Brisbane, Melbourne, Adelaide and Perth (**State Aggregation**).

(b) National aggregation interconnects are available in Sydney, Melbourne and Perth (**National Aggregation**).

4.3. It is the Customer's responsibility to ensure each AGVC has sufficient capacity to provide the Customer's desired level of performance or contention for its End Users, and to alter the AGVC capacity in response to changes in traffic demand from its End-Users.

5. PROVISION OF SERVICE – DSL AGGREGATION CIRCUIT

5.1. Vocus will provide a standards based interface for connection of the aggregated traffic from all DSL data links from a Vocus aggregation location to the Customer's network. This interface will be one of the following options:

(a) Optical Gigabit Ethernet as per IEEE802.3z

(b) Electrical Gigabit Ethernet as per IEEE 802.3ab

5.2. Support for Ethernet jumbo frames is required. A minimum frame size of 1600 with support of a maximum frame size of 4400.

5.3. Any data centre interconnect fees are the responsibility of the Customer.

5.4. If the Customer does not a have a point of presence within a Vocus data centre where the DSL Tail Circuits are delivered to, then

there will be a charge to provide a service between the Vocus location and the Customer's network.

5.5. The Customer will nominate to Vocus one or more Layer 2 Tunnelling Protocol (**L2TP**) realm names to be used by End Users to authenticate access to the network. These will be provisioned within the Vocus network and also within Vocus' Supplier networks.

6. CUSTOMER REQUIREMENTS

6.1. The Customer must provide an L2TP Network Server (**LNS)** to terminate the L2TP tunnels carrying End User traffic to the Customer

6.2. The Customer must maintain a RADIUS (Remote Authentication Dial-In User Service) service containing authentication information for each of the Customer's End-Users. Vocus' network will query the Customer's RADIUS service each time a Customer's End User connects to the network with a realm name associated with the Customer.

6.3. The Customer agrees and acknowledges that it is the Customer's responsibility to maintain a reliable LNS (Layer 2 Network Server) and RADIUS service, and that the Customers End Users may be adversely affected should the Customer's LNS or RADIUS service become unavailable or contain incorrect information.

6.4. The Customer indemnifies Vocus and any of its suppliers for any claim or difficulty an End User of the Customer may experience due to a problem or fault within the Customer's RADIUS service or LNS service. No Service Level Rebate will be paid in respect of any loss of connectivity or function between the Vocus network and the Customer's RADIUS service.

7. SERVICE INCREMENTS

7.1. Additional AGVC capacity is orderable and may be upgraded in 50 Mbps increments (when bandwidth is < 300Mbps) or 100Mbps increments (when bandwidth is > 300Mbps) with a minimum initial service order of 150 Mbps per State Aggregation location, or 150Mbps for National Aggregation.

7.2. An AGVC is down-gradable although orders to downgrade will be rejected when placed within 30 days of a previous upgrade or downgrade.

7.3. Customer must maintain minimum initial contracted AGVC bandwidth.

8. SERVICE DESCRIPTION – DSL TAIL CIRCUITS – GENERAL

8.1. A DSL Tail Circuit provides network connectivity to the Vocus network from End User premises. The network connectivity is provisioned on a metallic wire pair usually used as a standard telephone line.

8.2. Vocus provides layer 2 DSL (ADSL2+ and ADSL1 services) which is provided over Vocus' Supplier's network for DSL Tail Circuits delivery.

8.3. Appendix A to this Service Schedule contain clauses that are specific to the DSL Tail Circuit, including the available line-rate options.

8.4. DSL Tail Circuits are not available in all locations. Vocus will provide the ability to perform a service qualification check for availability prior to ordering a service.

8.5. Vocus does not normally provide Customer Premise Equipment (**CPE**) for connection to the DSL Tail Circuit. It is the responsibility of the Customer or the End Users to provide compatible CPE for the Service. The Customer must ensure that End User or Customer equipment that is connected to the Service is labelled with the ACMA telecommunications compliance mark (the "A-tick") and conforms to all laws and technical standards applicable.

8.6. CPE connected to DSL Tail Circuits use Point-to-Point Protocol (**PPP**) sessions within L2TP tunnels to authenticate the End User's connection credentials with the Customer's RADIUS equipment and provide a conduit to the Customer's AGVC.

8.7. ADSL services are built using shared access networks. Throughput speeds, latency and latency variations may vary depending on the traffic of other End Users, and are not guaranteed. ADSL services may not be suited to applications that are sensitive to such network parameters.

9. CUSTOMER AUTHORITY

9.1. Before ordering a DSL Tail Circuit with Vocus the Customer must have a valid customer authority (**CA**) provided by the End User within the past 30 days authorising the service to be supplied to the End User by the Customer. A recorded verbal authorisation may also be acceptable.

9.2. The Customer must retain the CA within their records. Vocus may request a copy of the CA from the Customer, and upon request the

Customer must supply a copy of the CA to Vocus. A CA request usually will be in response to a request from another carrier or carriage service provider, or an Australian telecommunications regulator.

9.3. A DSL Tail Circuit CA must include as a minimum:

(a) the End User's details including title, name or business name, position and address and (where applicable) the details of the authorised representative;

(b) the End User's billing address;

(c) the End-User's Full National Number (FNN) / PSTN service number

(d) Australian Company Number (ACN) (if applicable) or Australian Business Number (ABN) (if applicable) or Australian Registered Body Number (ARBN) (if applicable);

(e) If churning, name of the losing carriage service provider;

(f) Authorisation from the End User to transfer their service, or to order a new service; and

(g) If churning, confirmation from the End User that they acknowledge that their existing broadband service will be disconnected and termination fees or other contractual obligations may apply.

9.4. The Customer must store a CA for two years with a view to producing a CA on request to confirm that the Service connection was authorised by the End User.

9.5. An authorised representative of the End User may only complete a CA if this is specified on the relevant CA.

9.6. If an authorisation has been provided by the End User for an authorised representative to act on their behalf, the Customer must also retain the authorisation for two years.

9.7. A CA may be paper; voice recording or internet recorded but must always be in a reproducible form that proves that the minimum information requirements were met. Where the Customer has obtained an internet recording, this may be flagged as a paper CA; voice recordings must be retained as reproducible audio.

9.8. The Customer may develop a CA form according to its own design but the CA must contain the minimum information as outlined above.

10. PROVISION OF SERVICE – DSL TAIL CIRCUITS

10.1. The Customer must order a DSL Tail Circuit via the Vocus "Members Portal" or the Vocus B2B API.

10.2. Before a DSL Tail Circuit may be ordered, it is a prerequisite that a AGVC be established between Vocus and the Customer, specific to the technology of the DSL Tail Circuit and the minimum capacity of the AGVC must be 150Mbps.

10.3. At End User premises Vocus will arrange for a standards based interface to be provided for connection of CPE to one of the Vocus Suppliers' access networks. The interface will be one of the following technology options:

(a) ADSL1 as per ITU-T Rec. G.992.1

(b) ADSL2+ as per ITU-T Rec. G.992.5

10.4. Layer 2 DSL services are line sharing services (**Co-existing Services**) and the DSL Tail Circuit is provided on the same copper wire pair as an existing analogue PSTN service, and the service location is primarily defined by the PSTN service number.

10.5. DSL Tail Circuits may not be available to every location, due to a number of factors including but not limited to network topology, line distance, absence of unused pairs and the presence of an incompatible service.

10.6. Co-existing Services may not be compatible with some telecommunications options existing on the PSTN line. These options, if currently operating, must be discontinued before the DSL Tail Circuit can be ordered and following the installation of the DSL Tail Circuit these incompatible telecommunications options will no longer be available. These options include, but are not limited to: priority assistance, auxiliary numbers associated with "FaxStream Duet" and "EasyCall Multiple Number" services, ISDN services, and some answering and fax machine models. A list of known telecommunications services and products that are incompatible with ADSL is published at https://www.telstrawholesale.com.au/content/dam/tw/products/broadband/ADSL/Documents/data_access_incompatibleproducts.pdf and this list will be updated from time to time by Telstra.

10.7. Co-existing Services may require line filtering equipment to be installed by the Customer or End User. Where a monitoring service or other hard-wired device is connected to the PSTN line, or more than four telephone devices are connected to the line, a central filter/splitter must be installed at the Customer or End Users cost. Failure to install appropriate filters may result in the DSL Tail Circuit being interrupted and/or the DSL service interrupting or interfering with the other services co-existing on the PSTN line.

10.8. The Service does not include the provision of cabling or equipment beyond the network boundary point (**NBP**) at each End User location. Customers may need to check the availability of cabling within the End User's premises between the NBP and the desired location of the CPE.

10.9. The Customer may request a Service qualification check for locations prior to submitting a Service Order to determine availability and suitability of the requested technology option. Vocus reserves the right to reject or terminate a Service Order for a location if the Service does not pass the Service qualification check or the particular delivery type is not available at that location.

11. FEES AND CHARGES STRUCTURES – DSL TAIL CIRCUITS

11.1. Each component within the Service is a fixed price service, charged on a non-recurring basis or recurring monthly in advance. The Customer must pay all fees detailed in the DSL L2TP rate card that apply to each DSL Tail Circuit ordered.

12. FAULT REPORTING

12.1. Before reporting a fault to Vocus, the Customer must take all reasonable steps to ensure that the fault is not a fault in any Customer equipment or within the Customer's administrative domain.

12.2. Customers who rely on Vocus supplied CPE must specifically ensure that it is receiving power and cooling as required to be operational.

12.3. As soon as the Customer has confirmed the fault is related to the Service supplied by Vocus, that fault must be reported to Vocus by means of the B2B interface or email and open a trouble ticket. Telephone support is only an option of last resort and charges may apply.

12.4. Vocus will endeavour to respond and resolve the fault within a reasonable period of time.

12.5. Restoration times for DSL Tail Circuits vary depending on the Supplier network, and are detailed in the appropriate Appendix to this Schedule.

12.6. The AGVC is delivered using data services over Vocus fibre or Vocus dark fibre services. Please refer to the Vocus SLA for more information. A report of a fault or a suspected fault that Vocus believes is necessary to refer to a relevant Supplier will not be responded to earlier than the following Business Day.

12.7. Without limiting any other clause of this Agreement, Vocus will not be liable to the Customer in connection with any fault that is outside of the control of Vocus.

13. SCHEDULED MAINTENANCE

13.1. It is necessary for Vocus from time to time to perform scheduled maintenance to maintain Vocus Infrastructure. Vocus will use all reasonable endeavours to limit the frequency and impact of scheduled maintenance to its Customers.

13.2. Vocus will provide the Customer with notice via email to the technical contact listed on the Service Order prior to the scheduled maintenance, with the exception of scheduled maintenance performed by Vocus' Suppliers.

Type	**Expected Impact**	**Notice Period**
Hazard	Work undertaken on Vocus Infrastructure which may impact Customer's Service if the work does not go as planned	5 Business Days
Service Impacting	Customer's Service will remain operational although impacted in some way, such as a one second switch hit or increased latency due to an	5 Business Days

	alternate traffic path being used	
Outage	Customer's Service will be unavailable for the period of time mentioned in the notice	10 Business Days
Emergency*	As per Hazard, Service Impacting or Outage	As soon as reasonably practicable with a goal of 8 hours minimum notice.

*Emergency means a planned activity that Vocus deems necessary to be performed at short notice in order to: (a) correct any issue on a business critical system or service, or (b) protect the business or organization.

If scheduled maintenance is required by Vocus' Suppliers, Vocus will provide the Customer with as much prior notice as is reasonably possible in the circumstances.

14. ACCEPTABLE USAGE

14.1. The Customer warrants that it will not use, or attempt to use, a Service and that it will use all reasonable endeavours to prevent its End Users using or attempting to use a Service:

(a) to break any law or to infringe another person's rights;

(b) to expose Vocus or its suppliers to liability;

(c) to transmit, publish or communicate material which is defamatory, offensive, abusive, indecent, menacing or unwanted;

(d) in any way which damages, interferes with or interrupts the Service, the Vocus Network or a Supplier network; or

(e) to breach Vocus or Suppliers' "Acceptable Use" or "Fair Use" policies (if applicable).

14.2. The Customer acknowledges that it is solely responsible for:

(a) ensuring it has all necessary consents and authorisations to resupply the Service to End Users, including consents and authorisations from End Users, Suppliers and other carriage service providers;

(b) dealing with End Users concerning fault reports and other complaints or enquiries about the Service;

(c) responding to all End User fault reports, complaints or enquiries about services which are provided using the Service; and

(d) billing and collecting from End Users for all services which are provided using the Service.

14.3. The Customer acknowledges that neither Vocus nor its Suppliers are obliged to:

(a) monitor use of the Service or any individual DSL Tail Circuit

(b) ensure End Users do not exceed any monthly download or upload limits or excessively use their service; or

(c) suspend or configure an individual Service if any of the events specified in this Service Schedule occur, and whether or not Vocus does so, the Customer remains liable for use of the Service.

(d) Vocus may ask the Customer to stop, or ask it to stop its End Users, acting or failing to act in a manner which Vocus reasonably believes is contrary to clause 14.1. The Customer will as soon as reasonably practicable (but in any case within two Business Days) comply with any such request. If the Customer does not, then Vocus may, in its absolute discretion and without liability, take any steps reasonably necessary to ensure compliance with clause 14.1 including suspending the relevant DSL Tail Circuit or the entire Service.

APPENDIX A – TERMS SPECIFIC TO LAYER 2 DSL

SERVICE OPTIONS FOR ADSL TAIL CIRCUITS

A.1 DSL services provide up to 20Mbps downstream / 1 Mbps upstream. The typical downstream capacity is approximately 15 Mbps, and the minimum capacity is at least 880kbps. The service will synchronise to the highest technically achievable line-rate achievable on the End User's line.

ORDERING AND PROVISIONING – ADSL

A.2 The Customer releases Vocus from all liability to Customer, and indemnifies Vocus against all loss suffered by Vocus in connection with any claims made or actions brought against Vocus (including by third parties, resellers and End Users) arising from:

(a) disruption in basic telephone service or other service provisioned on the same pair as an End User access;

(b) unavailability, suspension or cancellation of any End User access;

(c) cancellation of, or refusals to provide, all incompatible products; or

(d) possible breaches of the Telecommunications (Customer Service Guarantee) Standard 2011 (Cth) in respect of an End User.

(e) to the extent that the loss is caused by the provision, transfer or cancellation of all or part of the Service

(f) When ordering an DSL Tail Circuit, Customer must select one of the ADSL line transmission rates in the following table:

Up to 1.5Mbps downstream and up to 256kbps upstream	Up to 8Mbps downstream and up to 384kbps upstream	Up to 20Mbps downstream and up to 1Mbps upstream

END USER AGREEMENTS

A.3 The Customer must include in any agreement with End Users terms consistent with the following, modified so as to not identify Vocus by name (Vocus may be referred to as a Supplier):

- Vocus is only able to provide a DSL service if the End User has, and continues to use, a qualified telephone line over which Telstra or a reseller of Telstra supplies a standard telephone service.
- Connection of the Service will mean that incompatible products from Vocus or other service providers will not be supplied on that qualified telephone line.
- If the Customer or the End Users are using any incompatible products Vocus will not be able to supply the DSL service on the relevant qualified telephone line.
- Installation and operation of a monitoring service may cause temporary disruption to a DSL service.
- Where the End User has, or is acquiring, a monitoring service the End User may need to install additional equipment (this equipment is not at Vocus' cost and Vocus has no responsibility for this equipment) to be able to receive the DSL service.
- Vocus or its Suppliers may at any time change the method of delivery of the DSL service.
- During a transfer of a DSL Tail Circuit to Vocus there may be a brief period when the DSL service

is interrupted. Vocus and its supplier is not liable for any interruption or delay in the transfer process.

- Neither Vocus nor its Supplier (which may be referred to as a carrier or supplier to you) is liable to the End User in any circumstances (including in negligence) in relation to any Service supplied to the End User, any delay in supplying the Service or any failure to supply the service.
- The End User must comply with the acceptable usage clauses of this Appendix.
- Vocus or its Supplier may suspend or configure a DSL service if any of the events specified in this Agreement occur, and whether or not this occurs, the Customer remains liable for the use of the service.

A.4 The Customer must:

- On request, provide Vocus with a copy of its End User agreement, including any specific End User agreement if Vocus reasonably suspects the End User is not complying with the "Acceptable Use Policy";
- Not resupply any DSL service to any person who has not agreed to be bound by the End User agreement; and
- Enforce the End User agreement where not to do so could have a detrimental effect on Vocus or its Supplier's networks.

RECTIFICATION TIMEFRAMES – DSL

A.5 Vocus and its Suppliers will use their best endeavours to investigate and repair or rectify DSL faults and service issues within the following timeframes. Rectification may include a temporary service restoration, with a permanent resolution to be completed at a later date.

A.6 The hours of coverage for service response and restoration activity for DSL services are as follows:

Table 1 – DSL Hours of Support Coverage

Hours of coverage	8:00am to -6:00pm	10:00am – 6:00pm
Days of coverage	Monday – Friday, excludes National Public Holidays	Saturdays, excludes National Public Holidays

A.7 The targeted maximum timeframe to respond to a reported fault within the hours of support coverage is within 4 hours.

A.8 The targeted time to restore a service after a fault report is as follows:

Table 2 – DSL Mean Time To Restore Timeframes

All areas	By the end of the next full Business Day