

Annexure D

Statement Of Work:
Broadband Connectivity Services for the
Western Cape Government (WCG)

D.1 SCOPE OF SERVICES	4
D.1.1 INTRODUCTION	4
D.1.2 OVERVIEW OF SCOPE	4
D.2 ASSUMPTIONS	5
D.2.1 EQUIPMENT	5
D.2.2 SKILLS AND RESOURCES	6
D.2.3 SERVICE LEVEL MONITORING	6
D.3 BROADBAND SITE TYPES	6
D.3.1 CORPORATE SITES	6
D.3.2 NON-CORPORATE SITES	7
D.4 BROADBAND SITE LISTS	8
D.4.1 INITIAL SITE LIST	8
D.4.2 ADDITIONAL SITE LIST	9
D.4.3 NOMADIC SITE LIST	9
D.5 FINAL, INTERIM, TEMPORARY AND REPLACEMENT SERVICES	9
D.5.1 FINAL SERVICES	9
D.5.2 REPLACEMENT SERVICES	10
D.5.3 INTERIM SERVICES	10
D.5.4 TEMPORARY SERVICES	11
D.6 PROJECT DELIVERY MANAGEMENT	11
D.6.1 GENERAL	11
D.6.2 PROJECT MANAGEMENT DELIVERABLES	11
D.6.3 MILESTONE TARGETS	14
D.6.4 PROJECT DELIVERY RESOURCES	14
D.6.5 ACCEPTANCE, TESTING AND BB SERVICE HANDOVER PROCESS	14
D.7 SERVICE MANAGEMENT AND SUPPORT	15
D.7.1 GENERAL	15
D.7.2 SERVICE MANAGEMENT DELIVERABLES	15
D.7.3 SERVICE MANAGEMENT RESOURCES	16
D.8 CLOUD ACCESS SERVICES	16
D.8.1 EXPRESSROUTE	16
D.8.2 FASTCONNECT	17
D.8.3 OTHER CLOUD ACCESS SERVICES	17
D.9 DECOMMISSIONING	18
D.9.1 GENERAL	18
D.9.2 DECOMMISSIONING OF SITES ON THE INITIAL SITE LIST	18
D.9.3 DECOMMISSIONING OF SITES ON THE ADDITIONAL SITE LIST	18
D.9.4 DECOMMISSIONING OF SITES ON THE NOMADIC SITE LIST	19
D.10 CHANGE, REQUEST AND INCIDENT MANAGEMENT	19
D.10.1 CHANGE MANAGEMENT	19
D.10.2 SERVICE REQUEST MANAGEMENT	20
D.10.3 INCIDENT MANAGEMENT	22

D.11 SERVICE LEVEL INDICATORS.....	24
D.11.1 INCIDENT FEEDBACK	24
D.11.2 ROOT CAUSE ANALYSIS.....	24
D.11.3 LINK AVAILABILITY	25
D.11.4 NMS AVAILABILITY	26
D.11.5 ITSM AVAILABILITY	26
D.11.6 REQUEST MANAGEMENT.....	26
D.11.7 THROUGHPUT LINE CAPACITY	27
D.11.8 SECONDARY LINK TO AGGREGATED LINK	29
D.11.9 MAXIMUM TRANSMISSION UNIT	29
D.11.10 LATENCY.....	29
D.11.11 JITTER (FOR CORPORATE SITES ONLY)	30
D.11.12 PACKET LOSS.....	31
D.11.13 DELIVERY OF SERVICE LEVEL INDICATOR REPORT.....	31
D.11.14 DELIVERY OF INTERNET STATISTICS LOG REPORT (FOR NON-CORPORATE SITES)	32
D.11.15 MANAGEMENT OF MEETING ATTENDANCE.....	32
D.12 SERVICE CREDITS.....	32
D.12.1 CALCULATION OF SERVICE LEVEL INDICATOR CREDITS	32
D.12.2 CALCULATION OF MILESTONE DELIVERY CREDITS	35
D.13 REPORTING	36
D.13.1 REPORTING PORTAL.....	36
D.13.2 REPORTS	36

D.1 Scope of Services

D.1.1 Introduction

- D.1.1.1 This Broadband Statement of Work (BB SOW) describes the broadband connectivity services (BB Services) required to be delivered to SITA for the WCG.
- D.1.1.2 The BB Services are required to be delivered at two Broadband Site Types, which each require a different network architecture, per section D.3.
- D.1.1.3 The BB Services are required to be delivered at Sites on three Broadband Site Lists, per section D.4.
- D.1.1.4 The Service Provider must provide the Final, Interim, Temporary and Replacement Services, per section D.5.
- D.1.1.5 The BB Services are required to be delivered according to four different Service Level Types, as outlined in paragraph D.6.2.18.

D.1.2 Overview of Scope

The Service Provider must:

- D.1.2.1 Present a Layer 2 Service to SITA at the Corporate Sites in Annexure C as further described in paragraph D.3.1.
- D.1.2.2 Provide SITA with Internet access with a Contention Ratio of 1:1 via Virtual Private Network (VPN) services at Non-Corporate Sites in Annexure C as further described in paragraph D.3.2.
- D.1.2.3 Provide connectivity to the Sites in Annexure C using the following technologies:

	Technology Type	Symmetry (download:upload)
a)	Fibre	Symmetrical (1:1)
b)	Microwave wireless on licensed spectrum	Symmetrical (1:1)
c)	Point-to-point radio wireless on licensed spectrum	Symmetrical (1:1)
d)	Point-to-multipoint radio wireless on licensed spectrum	Symmetrical (1:1)
e)	Fixed Satellite (e.g., VSAT) (only used as agreed between the Parties)	Asymmetrical (5:1)
g)	Mobile Satellite (e.g., vehicle-mounted VSAT; mobile satellite internet terminal) (only used as agreed between the Parties)	Asymmetrical (Best Effort)
h)	Mobile Network Technology (3G/LTE/4G/5G or similar subsequent technology) (only used as agreed between the Parties)	Asymmetrical (Best Effort)
i)	Other transmission carrier technologies (e.g., Low Earth Orbit Satellite when available) (only used as agreed between the Parties)	As Agreed between the Parties

- D.1.2.4 Provide the Final, Interim, Temporary and Replacement Services as further described in Section D.5;
- D.1.2.5 Provide project delivery management as further described in Section D.6;
- D.1.2.6 Provide Service Management and Support as further described in Section D.7;
- D.1.2.7 Provide Cloud Access Services as further described in Section D.8;
- D.1.2.8 Decommission Services when requested as further described in Section D.9;
- D.1.2.9 Comply with the Change, Request and Incident Management processes as further described in D.10;
- D.1.2.10 Ensure BB Services perform according to the Service Level Indicators as described in Section D.11;
- D.1.2.11 Assume all costs related to migrating out of this Agreement.
- D.1.2.12 The table below provides an abbreviated summary of the Service Level Types:

Service Level Type	Best Effort	Basic	Resilient	Fully Redundant
Link Availability	-	98%	99.5%	99.95%
Redundant Links	✘	✘	✓	✓
Redundant Network Equipment	✘	✘	✘	✓
On-site Equipment Support	✓	✓	✓	✓
On-site Support of SITA's CPE at Corporate Sites	✓	✓	✓	✓
24/7 Proactive Monitoring from the NOC	✓	✓	✓	✓

D.2 Assumptions

D.2.1 Equipment

- D.2.1.1 The Service Provider will be responsible for ensuring that all equipment used to deliver the BB Services is appropriately selected and performs as intended by the Original Equipment Manufacturers (OEM) and the Service Provider will be held liable for any impact to the BB Services or to other services/property at the Site caused by any failure of the Equipment.
- D.2.1.2 The Service Provider is expected to ensure that all its equipment is fully functional after any power failure has occurred.
- D.2.1.3 The Service Provider must ensure that all Equipment utilised to perform the BB Services is Type Approved per ICASA regulations under section 35 (1) of the Electronic Communications Act.

D.2.2 Skills and Resources

- D.2.2.1 The Service Provider will have the necessary skills and resources available to perform the Services. Resources include human, financial and technical resources and any such component necessary to deliver the BB Services.
- D.2.2.2 The Service Provider may not provide a reason of incapacity of its supplier/s or any third party as a reason for non-performance.

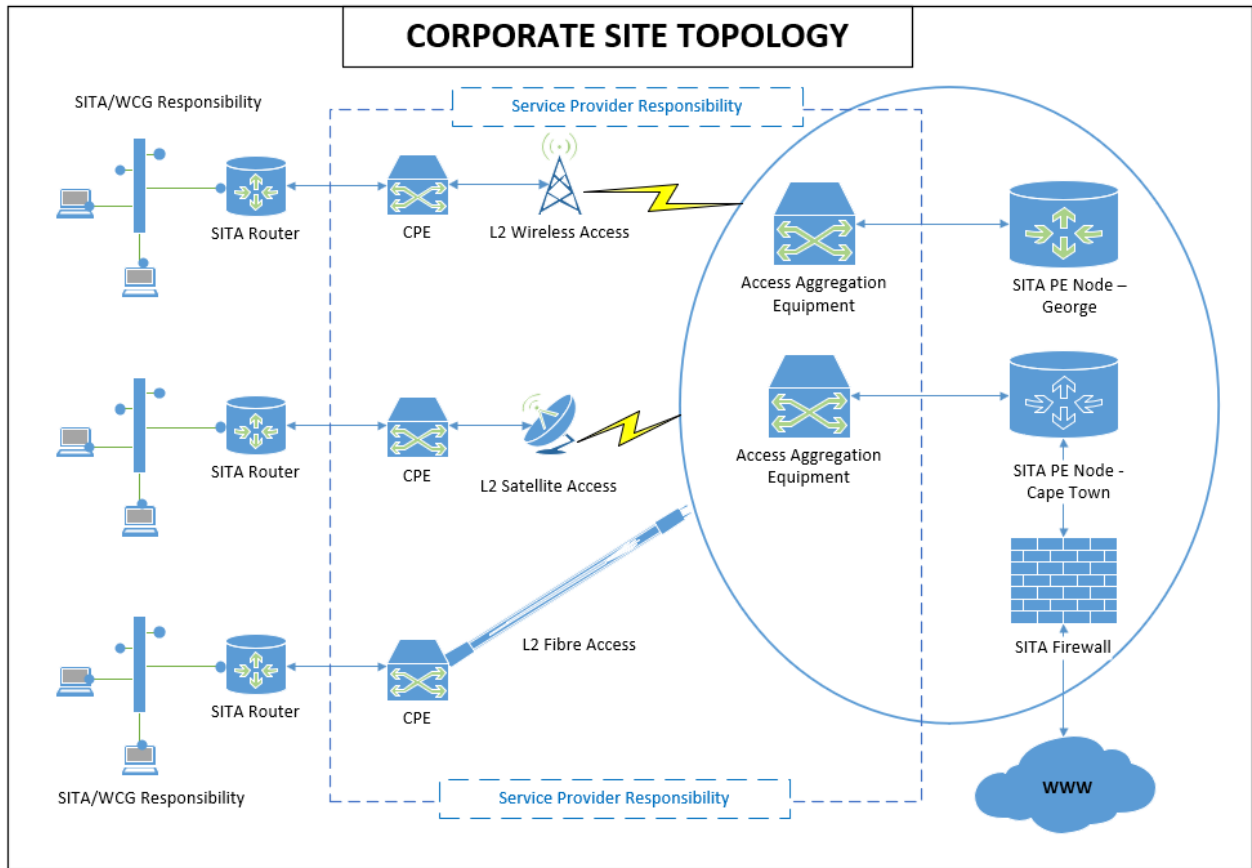
D.2.3 Service Level Monitoring

- D.2.3.1 The Service Provider's NMS will monitor the Service Level Indicators on a continuous (24x7x365) basis.
- D.2.3.2 SITA retains the right to conduct any form of testing and monitoring of the BB Services that it receives under this Agreement and raise Incidents through its ITSM system (linked to the Service Provider's ITSM system per paragraph D.6.2.2) when it finds that the Service Provider is not achieving any of the Service Level Indicators. In this case, the Service Provider will be expected to attend to these Incidents according to paragraph D.10.3.

D.3 Broadband Site Types

D.3.1 Corporate Sites

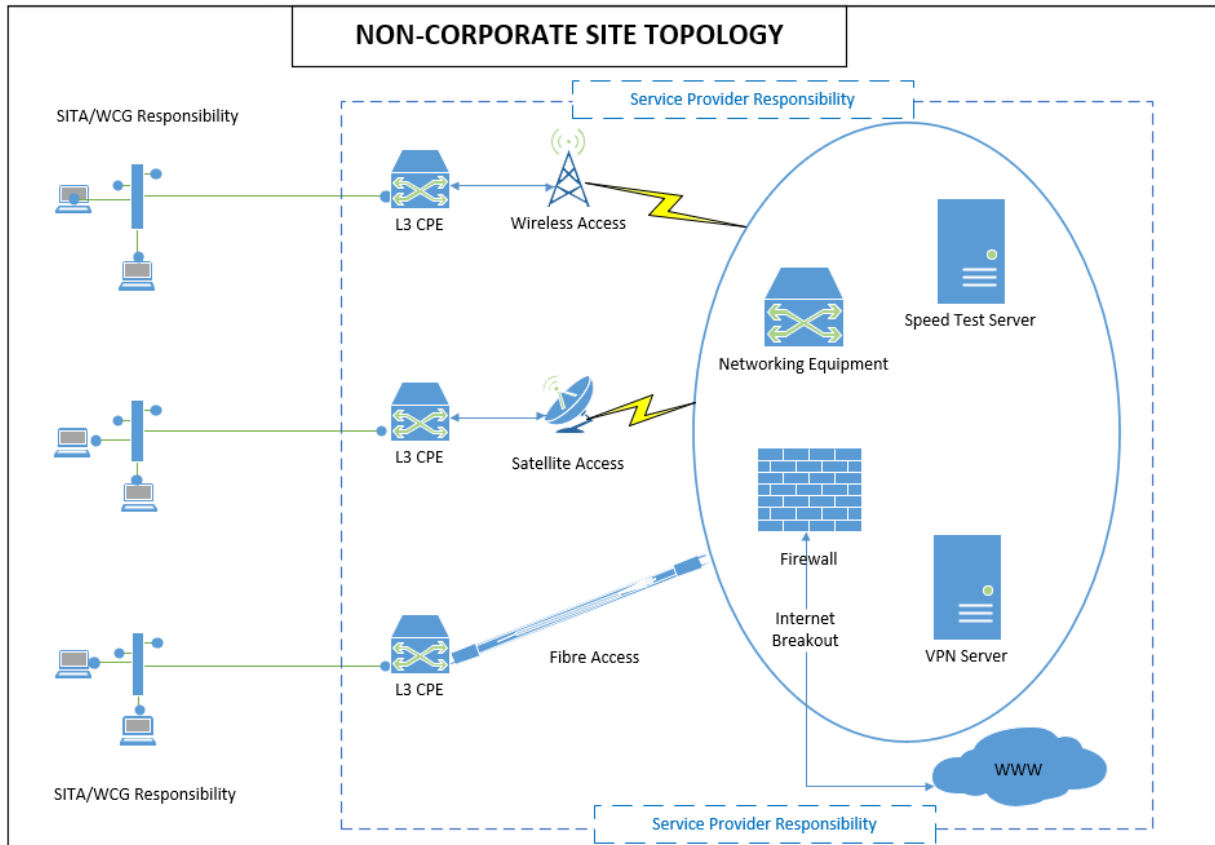
- D.3.1.1 Corporate Sites are sites where the WCG Departments primarily conduct administrative and other frontline service delivery functions such as head offices, administrative hubs, hospitals and clinics. These sites are at fixed locations.
- D.3.1.2 Corporate Sites require the provision of a Layer 2 Service to SITA, which connects to SITA's Provider Edge (PE) nodes in Cape Town and George via Network Node Interfaces (NNI's). SITA will provide the Layer 3 interface to the WCG. This is further illustrated in the diagram below:



Note: The diagram above is provided as an illustrative example and does not intend to specify equipment or the actual design of the Service Provider's solution.

D.3.2 Non-Corporate Sites

- D.3.2.1 Non-Corporate Sites are sites such as libraries, museums, e-centres, schools, road camps and other sites nominated for broadband connectivity by the WCG. These sites can be at fixed or moveable locations.
- D.3.2.2 Non-Corporate Sites require the provision of Internet access services (with a Contention Ratio of 1:1 via VPNs) as per the diagram below:



Note: The diagram above is provided as an illustrative example and does not intend to specify equipment or the actual design of the Service Provider's solution.

D.3.2.3 At Non-Corporate Sites, Mobile Satellite and Mobile Network Technology types can be provided as an Internet service but without the requirement of a VPN as agreed with SITA.

D.4 Broadband Site Lists

D.4.1 Initial Site List

- D.4.1.1 The Initial Site List (ISL) comprises the Sites listed as such in Annexure C where BB Services are required at a fixed location. These Sites represent SITA's minimum connectivity requirement on this Agreement, and SITA will only be permitted to decommission a maximum of 2% of Sites on the Initial Site List at no charge.
- D.4.1.2 The Initial Site List comprises both Corporate and Non-Corporate Sites.
- D.4.1.3 At least seventy percent (70%) of the Access Links at the Sites on the Initial Site List must be delivered on fibre technology.
- D.4.1.4 The Service Provider shall render the BB Services at Sites on the Initial Site List according to the pricing as set out in Annexure I (Pricing). Such pricing will only consist of Monthly Recurring Charges, which include the cost of installations.
- D.4.1.5 Sites can be swapped between the Initial Site List and the Additional Site List upon mutual agreement by the Parties per paragraph D.10.2.

D.4.2 Additional Site List

- D.4.2.1 The Additional Site List (ASL) comprises Sites listed as such in Annexure C where SITA may order new BB Services (via the Service Request Management process described in section D.10.2) in addition to the Sites on the Initial Site List at a fixed location.
- D.4.2.2 The Additional Site List comprises both Corporate and Non-Corporate Sites.
- D.4.2.3 The Service Provider shall render the BB Services at Sites on the Additional Site List according to the pricing as set out in Annexure I (Pricing). Such pricing includes Non-Recurring Charges for the installation of the BB Services, and Monthly Recurring Charges.
- D.4.2.4 Sites can be swapped between the Additional Site List and the Initial Site List upon mutual agreement by the Parties.

D.4.3 Nomadic Site List

- D.4.3.1 The Nomadic Site List (NSL) comprises Sites listed as such in Annexure C where SITA may order new BB Services (via the Service Request Management process described in section D.10.2) in addition to the Sites on the Initial Site List at a moveable location (i.e. they are Sites that move locations, such as a mobile clinic (vehicle) or road construction camp).
- D.4.3.2 The Nomadic Site List comprises only Non-Corporate Sites.
- D.4.3.3 The BB Services at Sites on the Nomadic Site List will only be ordered with “Best Effort” or “Basic” Service Level Types depending on the technology used (e.g., Fixed Satellite will be provided with a Basic Service Level Type and Mobile Satellite with a Best Effort Service Level Type).
- D.4.3.4 The BB Services and/or their monitoring at Sites on the Nomadic Site List will be activated and deactivated upon request from SITA, and, when active, must comply with the Service Level Indicators described in Section D.11.
- D.4.3.5 Due to their nature, Sites on the Nomadic Site List will not have a mains power supply and therefore the Service Provider will be required to ensure that its solution at these sites has the required power source for a continuous period of at least 8 hours. The WCG will be responsible for charging the power source / battery and therefore requires a solution that can be charged via the mains power.
- D.4.3.6 The Service Provider shall render the BB Services at Sites on the Nomadic Site List according to the pricing as set out in Annexure I (Pricing). Such pricing may include Non-Recurring Charges and/or the Monthly Recurring Charges for the BB Services.

D.5 Final, Interim, Temporary and Replacement Services

D.5.1 Final Services

- D.5.1.1 Final Services are the BB Services at a Site, with the corresponding technology type, listed as such in Annexure C (Site List).

D.5.2 Replacement Services

- D.5.2.1 SITA may request that an alternate carrier technology is implemented as a Final Service at any Site that fails to meet any required Service Level Indicator (as per section D.11) more than three times in any 6 (six) month period. Such Request for a Replacement Service will be made according to the Service Request Management process described in section D.10.2.
- D.5.2.2 The Service Provider's Service Proposal must provide a service in accordance with the Service Level Indicators described in section D.11.
- D.5.2.3 SITA will not incur any increase in the Monthly Recurring Charge for such Replacement Service and will only be liable for the Installation / Non-Recurring Charge of the Replacement Service.
- D.5.2.4 As BB Services are modified, the Change Register and Annexure C will be updated to reflect these changes. Replacement Services become the Final Services.
- D.5.2.5 If the Service Provider does not offer the requested alternate carrier technology or is unable to provide that technology competitively (considering terms and conditions, service levels, pricing and technical capability) at a Site, then SITA may Decommission the BB Service as per paragraph D.10.2.

D.5.3 Interim Services

- D.5.3.1 SITA may request the implementation of Interim Services to provide connectivity:
 - a) prior to the implementation of the Final Service. SITA recognises that the implementation of the BB Services at the Sites listed in Annexure C, or new BB Services requested via the Service Request Management process described in section D.10.2, may require lengthy lead times to deliver. Interim Services must be replaced by the Final Services.
 - b) to Sites where events of Force Majeure have disrupted the Final Services. Under these events, no billing will be accepted for the Final Services. The Interim Services must be replaced by the Final Services within 60 (Sixty) Calendar Days (or other such period approved by SITA) after the event of Force Majeure has come to an end. Failure to revert from the Interim Service to the Final Service after 60 days (or other such period approved by SITA) will be deemed a Link Availability failure and Service Credits will accrue as per section D.12
- D.5.3.2 Interim Services are requested and managed via the Service Request Management process described in section D.10.2 and the costs associated with an Interim Service are covered by SITA.
- D.5.3.3 An Interim Service must comply with the Service Level Indicators described in Section D.11.
- D.5.3.4 The Service Provider shall provide Interim Services according to the pricing for the Additional Sites List as set out in Annexure I (Pricing). Such pricing includes installation costs (Non-Recurring Charges) and the Monthly Recurring Charges for the BB Services.
- D.5.3.5 Any costs associated with migrating from the Interim Service to the Final Service will be for the Service Provider's account. Migration from the Interim Service to the Final Service must adhere to the Change Management process as per section D.10.1.

D.5.4 Temporary Services

- D.5.4.1 Temporary Services may be used by the Service Provider to provide a service when the Final, Interim or Replacement Service is unavailable, and the Service Provider wishes to continue billing for the Final Services at a Site. The Service Provider can request permission for the implementation of a Temporary Service from SITA and can only implement a Temporary Service upon SITA's approval of the request.
- D.5.4.2 Temporary Services are either replaced by the Final Service or SITA may approve the Temporary Service to become the Final Service.
- D.5.4.3 A Temporary Service must be delivered per paragraph D.6.2, and accepted by SITA per paragraph D.6.5 and will be measured according to the Service Level Indicators as described in Section D.11.
- D.5.4.4 Any additional costs associated with a Temporary Service will be for the Service Provider's account.
- D.5.4.5 Within a period of 60 (sixty) Calendar Days a Temporary Service must revert to its Final Service unless otherwise approved by SITA. Failure to revert from the Temporary Service to the Final Service after 60 days (or other such period as approved by SITA) will be deemed a Link Availability failure and Service Credits will accrue as per section D.12.

D.6 Project Delivery Management

D.6.1 General

- D.6.1.1 The Service Provider shall provide the BB Services at the Sites listed in Annexure C.
- D.6.1.2 The Service Provider shall collaborate and co-operate with SITA and/or its designated Service Management Organisation in the delivery of the BB Services and must take all reasonable instructions regarding the BB Services from SITA and/or SITA's designated Service Management Organisation.

D.6.2 Project Management Deliverables

The Service Provider shall, at no additional cost other than those included in Annexure I (Pricing), perform activities to deliver BB Services according to SITA's requirements at sites listed in Annexure C, including (but not limited to) activities to:

Prepare management systems

- D.6.2.1 Ensure integration between the Service Provider's Network Management System (NMS) and Information Technology Service Management (ITSM) system in order to log Incidents in accordance with paragraph D.10.3.2. The Service Provider will be responsible for any development required for the integration between these systems, and no BB Service will be accepted until this integration has been commissioned and confirmed in writing;
- D.6.2.2 Ensure a direct and bi-directional integration between the Service Provider's ITSM system and SITA's ITSM system. The Service Provider will be responsible for any development required for the bi-directional integration between the Service Provider's ITSM system and SITA's ITSM system, and no Service will be accepted until this integration has been finalised and accepted by SITA in writing.

- D.6.2.3 Provide a Fully Redundant network connection (99,95% available and treated according to the Service Level Indicators in Section D.11) between the Service Provider's ITSM system and SITA's ITSM system (referred to as the ITSM Link);
- D.6.2.4 Provide a speed testing server and service to allow End Users to test the link capacity at Non-Corporate Sites. The speed testing server must be located at the point in the network where the client traffic breaks out to the Internet.
- D.6.2.5 Ensure that the Service Provider's NMS is capable of monitoring whether the site mains power is on or off to the Equipment.
- D.6.2.6 Provide an online Reporting Portal for SITA to access real-time and historical information (for up to 2 years) for each Non-Corporate Site and for each of the VPN's for Non-Corporate Sites, per Section D.13.1.

Install the required Equipment

- D.6.2.7 Perform site assessments in preparation for the installation of the BB Services and document and electronically store the final installation layout.
- D.6.2.8 Install the required fibre or wireless infrastructure for the BB Services, noting that:
 - a) fibre or wireless infrastructure within the Site premises must be installed as approved by the WCG;
 - b) fibre installed across open ground from the manhole outside the Site up to a building on a Site must be installed underground (i.e., on-premises aerial fibre installations will not be permitted);
 - c) any cabling within a building must be installed in conduits / trunking;
 - d) all fibre technology types are terminated with SX multi-mode fibre LC-type interfaces, and all other technology types are terminated with RJ45 interfaces.
- D.6.2.9 Provide at least seventy percent (70%) of Access Links based on fibre technology at Sites on the Initial Site List.
- D.6.2.10 The Service Provider can construct its network service to accommodate aggregation mechanisms where multiple links are aggregated by the Service Provider to an "aggregated link", thus enabling a multi-point to single point architecture. If this aggregation mechanism is implemented, and where 15 or more links from Sites are being aggregated, the Service Provider must provide a secondary link to the aggregated link, at the same capacity and not on the same route. Furthermore, the Service Provider must ensure sufficient bandwidth is available on the aggregated link to meet the peak utilisation demand by upgrading the capacity of the aggregated link (and secondary link, where applicable) when the average utilisation exceeds 70% during any 5-minute period;
- D.6.2.11 Install (at a location on Site as determined by SITA) and maintain its cabinets, conforming to standards that enable the issue of a certificate of compliance, if required by SITA. This includes:
 - a) The installation of the Service Provider's cabinets with sufficient capacity to house the Service Provider's equipment and (at Corporate Sites) SITA's CPE (1U). Wall-mounted cabinets are preferable unless otherwise determined during the site assessment.
 - b) The supply and installation of fly leads.
 - c) The supply and installation of power leads to the allocated power outlet.
 - d) Cable management.

- D.6.2.12 Install its CPE in its cabinet;
- D.6.2.13 Store SITA's customer premises equipment (CPE) for Corporate Sites including but not limited to routers and cabling. Storage must allow access for SITA to barcode the assets.
- D.6.2.14 Install SITA's CPE in the cabinet at Corporate Sites, noting that such installation might not coincide with D.6.2.12 and might require an additional visit to the Site to complete such installation;
- D.6.2.15 Install its devices to monitor the availability of site mains power (to the Equipment) at each Site (apart from Sites on the Nomadic Site List). The reporting of site mains power to the NMS, per paragraph D.6.2.5, must be via a different network to the Access Link at the site (e.g. via Mobile Network Technology). The service provider will be responsible for confirming power availability to its equipment.
- D.6.2.16 Supply and install Backup Power to maximise network availability, where required by SITA. Backup power must be capable of supplying 4,5 hours of continuous power (to the Service Provider's equipment as well as SITA's Layer 3 equipment with estimated power consumption of 100Wh) and returning to full charge within 3,5 hours.

Provision the BB Services

- D.6.2.17 Provide the defined link bandwidth per Site as described in Annexure C. Note that this bandwidth allocation includes the bandwidth to be allocated for the Public Wi-Fi service if applicable (for example, a Corporate / Non-Corporate Site with a defined bandwidth of 100Mbps at which a 10Mbps Public Wi-Fi service has been deployed will have 90Mbps allocated for broadband connectivity);
- D.6.2.18 Provide the following Service Level Types to the Sites in Annexure C:
 - a) Best Effort Services
 - b) Basic Services - Links with an availability of 98% (ninety-eight per cent)
 - c) Resilient Services - Links with an availability in excess of 99.5% (ninety-nine-point five percent) with a backup link on a distinct and separate Path to a different SITA Provider Edge (PE) node.
 - d) Fully Redundant Services – links with an availability in excess of 99.95% (ninety-nine point nine five percent) and these are configured using redundant network equipment and with a backup link on a distinct and separate Path to a different SITA PE node.
- D.6.2.19 At Non-Corporate Sites, provide a VPN service for Schools, and other VPN services for other Non-Corporate Sites. Each VPN service must:
 - a) allow SITA to specify the rules of access for each of the VPN services;
 - b) encrypt the traffic being passed between the client interface at the site and the VPN server using strong encryption protocols such as IPsec;
 - c) allow remote access to the VPN through an encrypted tunnel for a limited number of End Users (max 80 End Users) accessing the VPN remotely from home or anywhere else;
 - d) allow for the delegation of internal Domain Name System (DNS) zones to SITA;
 - e) activate the Dynamic Host Configuration Protocol (DHCP) service on its CPE for Sites where there is no local DHCP service;
 - f) configure Network Address Translation (NAT), Quality of Service (QoS) etc. according to SITA's requirements; and

- g) include a content filtering system that prohibits access to undesirable content (such as pornography, blacklisted sites etc.)
- D.6.2.20 Ensure that roundtrip latency for the Internet Service via VPN's at Non-Corporate Sites is less than 260 milliseconds for International traffic.
- D.6.2.21 Ensure optimal routing Paths to destination services via peering partners (for the Internet Service via VPN's at Non-Corporate Sites).
- D.6.2.22 Activate the proactive monitoring (network and site mains power) of the BB Services provided to SITA at each Site; including SITA's access to the Service Provider's live NMS via a portal / dashboard.

Report on Project Delivery

- D.6.2.23 The Service Provider shall timeously provide all information relating to the delivery of the BB Services, as requested by SITA and complete and distribute reports, in accordance with section D.13.

D.6.3 Milestone Targets

- D.6.3.1 The delivery of the Final Services at sites on the Initial Site List must be delivered by at least the following milestone targets:
 - a) Delivery of Final Services at 50% of the Sites on the Initial Site List, and at least seventy percent (70%) of the Access Links at these Sites based on fibre technology, within 24 months of the Commencement Date.
 - b) Delivery of Final Services at 75% of the Sites on the Initial Site List, and at least seventy percent (70%) of the Access Links at these Sites based on fibre technology, within 36 months of the Commencement Date.
 - c) Delivery of Final Services at 100% of the Site on the Initial Site List and at least seventy percent (70%) of Access Links at these Sites based on fibre technology within 48 months of the Commencement Date.

D.6.4 Project Delivery Resources

- D.6.4.1 The Service Provider must manage the delivery of the project to meet the agreed Milestone Dates.
- D.6.4.2 SITA requires a suitably qualified and experienced project manager to manage the delivery/implementation on a day-to-day basis, to report on project progress and to attend all required meetings as per Annexure H - Governance.
- D.6.4.3 The project manager should be supported by other relevant personnel such as a lead technical engineer and implementation teams as required to meet the agreed Milestone Dates and Service Requests.

D.6.5 Acceptance, Testing and BB Service Handover Process

- D.6.5.1 The Service Provider will notify SITA two (2) Business Days in advance of their intent to hand over a Site as completed. Each BB Service handover (excluding Sites on the Nomadic Site List) may be preceded by a site inspection by SITA where the following will be assessed:
 - a) Cabinet;
 - b) Power supply per cabinet;

- c) Backup Power where required;
 - d) Installation of all equipment conforming to standards that enable the issue of a certificate of compliance, if required by SITA
- D.6.5.2 After the BB Service has been successfully installed and commissioned and all monitoring has been activated at a Site, the Service Provider must, within 30 Calendar Days, present SITA with a formal Service Handover Certificate (SHC, per Annexure G).
- D.6.5.3 Apart from Best Effort Services, each Access Link must be subjected to a minimum 15-minute ITU-T Y.1564 soak test and, in order to validate the functionality of the service, a full set of these test results must be provided with the Service Handover Certificate.
- D.6.5.4 When the Service Handover Process has been correctly followed (including the Service Provider's issuance of a SHC), and SITA has completed the site inspection and testing of such BB Service(s), SITA will either:
- a) at its sole discretion notify the Service Provider of acceptance of the BB Service at a site, whereafter billing may begin per the date on the Service Handover Certificate; or
 - b) notify the Service Provider of rejection of the BB Service at a Site if any of the BB Services are not provided in accordance with this BB SOW. Hereafter the Service Provider will be required to complete any required actions in order for the BB Services to be accepted and provide a new Service Handover Certificate.
- D.6.5.5 If SITA does not complete the site inspection and testing or notify the Service Provider of acceptance of the BB Service within 5 Business Days after receipt of the SHC, the BB Service will be regarded as accepted per the date on the Service Handover Certificate.

D.7 Service Management and Support

D.7.1 General

- D.7.1.1 The Service Provider shall maintain and support the BB Services at the Sites in Annexure C.
- D.7.1.2 The Service Provider shall collaborate and co-operate with SITA and/or its designated Service Management Organisation in support of the BB Services and must take all reasonable instructions regarding the BB Services from SITA and/or SITA's designated Service Management Organisation.

D.7.2 Service Management Deliverables

The Service Provider must:

- D.7.2.1 support and maintain the BB Services in accordance with SITA's operational requirements and as per the contracted Service Level Indicators in section D.11;
- D.7.2.2 provide an all-year 24-hour 7-day a week Service Desk, including Public Holidays. The Service Desk must be contactable by email and telephone and capacitated to respond to Incidents and Requests as described in section D.10.
- D.7.2.3 proactively monitor the BB Services provided to SITA, and Site mains power. This means that the supplier's systems must detect Incidents / link failures and breaches of Service Level Indicators as per section D.10.3 and notify SITA; and SITA must have access to the Service Provider's live NMS via a portal / dashboard;
- D.7.2.4 manage Change Requests in accordance with section D.10.1;

- D.7.2.5 manage Service Requests in accordance with section D.10.2;
- D.7.2.6 timeously provide all information relating to the delivery of the BB Services, as requested by SITA, and complete and distribute reports, in accordance with section D.13;
- D.7.2.7 provide on-site support of SITA's CPE under guidance from SITA;
- D.7.2.8 Upon SITA's reasonable request, perform other activities in support of the BB Services.

D.7.3 Service Management Resources

- D.7.3.1 In order to achieve a quality, reliable, and effective service SITA requires that the Service Provider provide service support personnel as required to comply with the Service Level Indicators. The primary focus of the service support personnel is to ensure that all elements of the BB Services are delivered timeously and efficiently.
- D.7.3.2 Accordingly, the Service Provider must provide:
 - a) A full-time dedicated Services Manager to:
 - i. manage the operations, maintenance and support of the BB Services on a day-to-day basis.
 - ii. be the primary interface between the Service Provider and SITA.
 - iii. to report on service performance and to attend all required meetings as per Annexure H - Governance.
 - iv. to analyse and review Service Provider's Performance against the SLAs and make recommendations as required.
 - v. to act as the channel to the Service Provider's organisation to make this organisation aware of SITA's business priorities, objectives and business drivers Service improvement and innovation.
 - b) Other relevant support personnel as required to meet the Service Levels as per section D.11.
- D.7.3.3 Furthermore, SITA requires the following business support services for which a specific contact person(s) is required:
 - a) Contract management; to manage the performance of this Agreement
 - b) Financial management; to manage the billing queries, invoicing, quotations and other financial matters

D.8 Cloud Access Services

D.8.1 ExpressRoute

- D.8.1.1 The Service Provider must provide a Fully Redundant Microsoft ExpressRoute service between the SITA data centre in Cape Town (at 108 De Waal Road, Elfindale, Cape Town, 7945) and the closest Microsoft Azure ExpressRoute "Meet Me" port.
- D.8.1.2 The ExpressRoute service must be provided in accordance with Microsoft's approved network architecture.
- D.8.1.3 The ExpressRoute service must terminate on two different SITA PE nodes at the SITA data centre.

- D.8.1.4 The ExpressRoute solution must include a fibre data link with a minimum throughput of 1 Gbps that is upgradeable to 2 Gbps, 5 Gbps and 10 Gbps.
- D.8.1.5 Two (2) 10Gbps SX multi-mode fibre LC-type interfaces must be provided with two separate Layer 2 devices (switch or chassis).
- D.8.1.6 The bidder will be responsible to provide the cabling runs and patch cords between the bidder equipment and SITA PE nodes, as well as all configurations on the SITA equipment.
- D.8.1.7 The ExpressRoute link must have an availability in excess of 99,95% (ninety-nine comma nine five percent).
- D.8.1.8 The Service Provider's NMS must monitor the ExpressRoute link.
- D.8.1.9 The Service Provider shall render the ExpressRoute Services according to the pricing as set out in Annexure I (Pricing). Such pricing includes Non-Recurring Charges for the installation of the ExpressRoute Services, and Monthly Recurring Charges.

D.8.2 FastConnect

- D.8.2.1 The Service Provider must provide a Fully Redundant Oracle FastConnect service between the SITA data centre in Cape Town (at 108 De Waal Road, Elfindale, Cape Town, 7945) and the closest Oracle FastConnect "Meet Me" port.
- D.8.2.2 The FastConnect service must be provided in accordance with Oracle's approved network architecture.
- D.8.2.3 The FastConnect service must terminate on two different SITA PE nodes at the SITA data centre.
- D.8.2.4 The FastConnect solution must include a fibre data link with a minimum throughput of 5 Gbps that is upgradeable to 2 Gbps, 5 Gbps and 10 Gbps.
- D.8.2.5 Two (2) 100Gbps SX multi-mode fibre LC-type interfaces must be provided with two separate Layer 2 devices (switch or chassis).
- D.8.2.6 The bidder will be responsible to provide the cabling runs and patch cords between the bidder equipment and SITA PE nodes, as well as all configurations on the SITA equipment.
- D.8.2.7 The FastConnect link must have an availability in excess of 99,95% (ninety-nine comma nine five percent).
- D.8.2.8 The Service Provider's NMS must monitor the FastConnect link.
- D.8.2.9 The Service Provider shall render the FastConnect Services according to the pricing as set out in Annexure I (Pricing). Such pricing includes Non-Recurring Charges for the installation of the FastConnect Services, and Monthly Recurring Charges.

D.8.3 Other Cloud Access Services

- D.8.3.1 SITA may request the Service Provider to provide other Cloud Access Services as may be required, according to mutually agreed terms, conditions and pricing.

D.9 Decommissioning

D.9.1 General

- D.9.1.1 Any costs associated with decommissioning of a BB Service at a Site will be for the Service Provider's account. Under the points below, SITA will cease to pay for any BB Service that has been decommissioned and SITA will not be liable for any other cost associated with such decommissioning.
- D.9.1.2 SITA may decommission BB Services at a Site either as a result of:
- a) operational requirements (i.e. when a link is no longer required by SITA). In this case SITA will give the Service Provider at least one months' notice of its intention to cease using such link.
 - b) failure by the Service Provider to achieve any Service Level Indicator or deliver on any obligation for a continuous period of 72 (seventy-two) hours from the time of detection of such failure or notification of such obligation. In this case, after the allotted 72 hours, SITA will either Request a Replacement Service at such Site or give the Service Provider one days' notice of its intention to cease using such link at a Site on one of the Broadband Site Lists.
 - c) failure by the Service Provider to meet any Service Level Indicator more than three times in any 6 (six) month period.

D.9.2 Decommissioning of Sites on the Initial Site List

- D.9.2.1 In the case of decommissioning a BB Service at a Site for operational requirements (per paragraph D.9.1.2a) SITA will only be permitted to decommission a maximum of 2% of the Sites on the Initial Site List in Annexure C without incurring any charges. Beyond this 2% limit, SITA will be liable for the cost of decommissioning any Sites on the Initial Site List in accordance with Annexure I (Pricing).
- D.9.2.2 In the case of decommissioning a link due to failure by the Service Provider to meet any required Service Level Indicator more than three times in any 6 (six) month period (per paragraph D.9.1.2c), SITA will either Request a Replacement Service at such link or give the Service Provider a minimum of 60 days' notice of its intention to decommission such link.
- D.9.2.3 SITA reserves the right to procure services at a Decommissioned Site outside of this Agreement at its sole discretion.

D.9.3 Decommissioning of Sites on the Additional Site List

- D.9.3.1 In the case of decommissioning a link for operational requirements (per paragraph D.9.1.2a) the Service Provider will not be liable for refunding the installation / Non-Recurring Charge for that Site to SITA.
- D.9.3.2 In the case of decommissioning a link due to failure by the Service Provider to meet any required Service Level Indicator more than three times in any 6 (six) month period (per paragraph D.9.1.2c), SITA will either Request a Replacement Service at such link or may decommission the use of any link with one months' notice, and the Service Provider will be liable for refunding the installation / Non-Recurring Charge for that Site to SITA.
- D.9.3.3 SITA reserves the right to procure services at a Decommissioned Site outside of this Agreement at its sole discretion.

D.9.4 Decommissioning of Sites on the Nomadic Site List

- D.9.4.1 In the case of decommissioning a link for operational requirements (per paragraph D.9.1.2a) the Service Provider will not be liable for refunding the installation / Non-Recurring Charge for the Site to SITA.
- D.9.4.2 In the case of decommissioning a link due to failure by the Service Provider to meet any required Service Level Indicator more than three times in any 6 (six) month period (per paragraph D.9.1.2c), SITA will either Request a Replacement Service at such link or may decommission the use of any link with one months' notice, and the Service Provider will be liable for refunding the installation / Non-Recurring Charge for that Site to SITA.
- D.9.4.3 SITA reserves the right to procure services at a Decommissioned Site outside of this Agreement at its sole discretion.

D.10 Change, Request and Incident Management

D.10.1 Change Management

- D.10.1.1 A change is the addition, modification, or removal of anything that could have a direct or indirect effect on BB Services. Change Requests are usually made from the Service Provider to SITA.
- D.10.1.2 Changes should be managed according to the following process:
 - a) For any change (including for maintenance) that is required to be made that has or could have the potential to adversely impact the BB Services, the Service Provider must submit a Change Request to SITA two weeks prior to the implementation date of the Change (unless such Change is an emergency Change that may present high risk if not addressed promptly (e.g., security threats, extensive service outages)). In this regard, the Service Provider shall explain and describe the proposed changes and time window, form a rollback plan for SITA and provide such technical information as SITA may reasonably request in writing. If required, the Parties may promptly meet to discuss any Change Request. SITA may only consider a change request once all required information has been provided.
 - b) Upon consideration of the Change Request, SITA shall:
 - i. accept the Change Request; or
 - ii. accept the Change Request on condition that a Temporary Service, at no additional charge to SITA, be provided by the Service Provider during the planned maintenance; or
 - iii. reject the Change Request; or
 - iv. suggest modifications to the Change Request.
 - c) Upon acceptance of the Change Request, the Service Provider shall implement the Change. Immediately after the Change has been implemented, the Service Provider must report to SITA regarding the outcomes of the Change and any other feedback such as deviations in the implementation, and any issues at each affected Site (e.g. MTU size not configured correctly).
 - d) Unsuccessful Changes must be rolled back according to the plan included in the Change Request.

- e) Upon completion of the Change and acknowledgement by SITA that the BB Service is fully functional, the Change can be closed.

D.10.2 Service Request Management

- D.10.2.1 A Service Request is the addition, modification or removal of BB Services or any part thereof. Service Requests are usually made from SITA to the Service Provider.
- D.10.2.2 The Service Provider may propose an activity listed in the table below to SITA, in which case SITA could consider such proposal and follow this Service Request Management process. Requests logged on the Service Provider's ITSM system must be forwarded by the Service Provider to SITA's ITSM system.
- D.10.2.3 Service Request Management will be performed as per the following table:

Request Management Activities:	Request Management Activities Success Criteria	Action Required by Service Provider within 10 Business Days
Install BB Service at a Site (on the Additional Site List or Nomadic Site List)	<p>The Request Management Process to Install BB Service at a Site (on the Additional Site List or Nomadic Site List) will only be required for sites that are not a part of the Initial Site List according to Annexure C.</p> <p>The Installation of a BB Service at a Site is accomplished when the Service Provider has successfully completed and tested the installation per paragraph D.6.2, and such installation has been accepted by SITA per paragraph D.6.5.</p>	Decline; or Provide Service Proposal
Install New Cloud Access Service	The Installation of a New Cloud Access Service is accomplished when the Service Provider has successfully completed the installation per paragraph D.8 and such installation has been accepted by SITA in writing.	Accept; and Provide Service Proposal
Install Backup Power	The Installation of Backup Power at a Site is accomplished when the Service Provider has successfully completed and tested the installation per paragraph D.6.2.16, and such installation has been accepted by SITA per paragraph D.6.5.	Accept; and Provide Service Proposal
Swap Site between the Initial and Additional Site Lists	A Site is swapped between the Initial and Additional Site Lists when both Parties mutually agree, in writing, to swap the Sites.	Decline; or Accept
Interim Service	Interim Services at a Site is accomplished when the Service Provider has successfully completed and tested the installation per paragraph D.6.2, and such installation has been accepted by SITA per paragraph D.6.5.	Decline; or Provide Service Proposal
Replacement Service	A Replacement Service is accomplished when the Service Provider has successfully completed and tested the installation	Decline; or

	of the alternate carrier technology per paragraph D.6.2, and such installation has been accepted by SITA per paragraph D.6.5.	Provide Service Proposal
Upgrade Bandwidth	A bandwidth upgrade is accomplished when the Service Provider has successfully upgraded the bandwidth on the existing carrier technology per paragraph D.6.2, and such installation has been accepted by SITA per paragraph D.6.5. If an Upgrade of bandwidth requires a new access technology, SITA will Request a Replacement Service.	Accept; and Provide Service Proposal
Change in Service Level Type	A change in Service Level Type is accomplished when the Service Provider has successfully completed the requested change in the service level type per paragraph D.6.2, and such installation has been accepted by SITA per paragraph D.6.5.	Decline; or Provide Service Proposal
On-premises Movement of BB Service	An On-premises Movement of BB Service is accomplished when the Service Provider has successfully completed the requested movement, within the same Site premises, and this movement has been accepted by SITA.	Accept; and Provide Service Proposal
Relocation of BB Service	A Relocation of BB Service is accomplished when the Service Provider has successfully completed the requested relocation to a new / different Site premise per paragraph D.6.2, and such installation has been accepted by SITA per paragraph D.6.5.	Decline; or Provide Service Proposal
Decommission BB Service	Decommissioning of the BB Service at a Site is accomplished when the Service Provider has successfully decommissioned such BB Service, removed all related equipment and, where applicable, stored such equipment on behalf of SITA, provided a Decommissioning Certificate, and such decommissioning has been accepted by SITA. Notwithstanding paragraph D.9.2.1, SITA can request any BB Service to be decommissioned within 30 days and any costs associated with decommissioning will be for the Service Provider's account.	Accept

D.10.2.4 Service Requests should be managed according to the following process:

- a) For any request, SITA will provide a duly completed Service Request Form (per Annexure G – Template Service Handover Certificate) to the Service Provider.
- b) Notifications of Requests logged on SITA's ITSM must be forwarded to the Service Provider's ITSM system.
- c) Upon receipt of the Service Request, the Service Provider shall, within 10 (ten) Business Days, either: decline the Service Request; or accept the Request (and provide a Service Proposal where required) – see third column in table above.

- d) The Service Proposal must describe the delivery and management of the requested BB Service in accordance with this BB SOW, including all required dependencies, commercial details, Time to Implement, term/length of provision of the BB Services, and other information relevant to render the BB Services in full. The price quoted for the execution of a Service Request must include all relevant charges per Annexure I (Pricing) and SITA will not be liable for any additional costs (foreseen or unforeseen) whatsoever.
- e) Upon receipt of the Service Proposal, SITA shall:
 - i. accept the Service Proposal; or
 - ii. reject the Service Proposal; or
 - iii. ask the Service Provider for such further information it requires in order to consider the Service Proposal; or
 - iv. suggest modifications to the Service Proposal.
- f) Upon SITA's acceptance of the Service Proposal, the Service Provider shall implement the Service Request according to the details included in the Proposal and the timelines in paragraph D.11.4.
- g) The completion time and date for Service Requests will be included on the Service Handover Certificate or Decommissioning Certificate completed by the Service Provider and accepted by SITA (apart from Requests to Swap Sites between Lists), and billing for the changed BB Services can only respectively begin or stop from this date.
- h) Following SITA's acceptance of any BB Services that have been modified, added or decommissioned, the Change Register and Annexure C must immediately be updated by the Service Provider.

D.10.2.5 Service Requests must be managed according to the indicator in paragraph D.11.6.

D.10.3 Incident Management

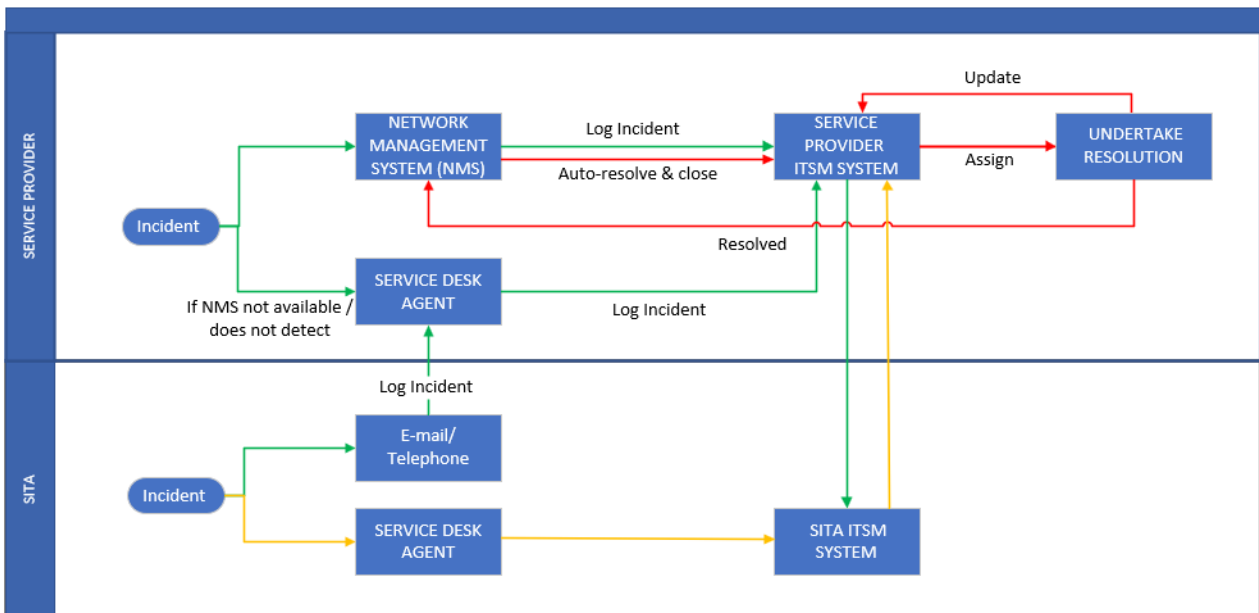
- D.10.3.1 An incident is an unplanned or unexpected event that deviates from normal operations and has the potential to disrupt or harm individuals, organizations, or systems. It often refers to an adverse or undesirable occurrence, such as accidents, emergencies, security breaches, failures, errors, or any other incident that requires attention or intervention to mitigate its impact.
- D.10.3.2 Per paragraph D.2.3.1 the Service Provider's NMS will constantly monitor the BB Services and therefore identify any service-affecting events across the network (e.g., packet loss), however not all service-affecting events are required to be logged as Incidents to the Service Provider's ITSM. Accordingly, for the purposes of logging Incidents to the Service Provider's ITSM, the Service Provider's NMS will log an Incident when:
 - a) the Link Availability tests per paragraph 0 fail to meet the Service Level Indicator on two consecutive occasions. However, for Resilient and Fully Redundant Service Level Types (per paragraph D.6.2.18), an Incident must be logged for a failure on either of the Paths.
 - b) Throughput Line Capacity fails to meet the Service Level Indicator as per paragraph D.11.7.
 - c) the Latency tests per paragraph D.11.10 fail to meet the Service Level Indicator on three consecutive occasions.
 - d) the Jitter tests per paragraph D.11.11 fail to meet the Service Level Indicator on three consecutive occasions.

- e) the Packet Loss tests per paragraph D.11.12 fail to meet the Service Level Indicator on three consecutive occasions.

D.10.3.3 Where an incident affects multiple links, SITA expects that all links associated with such incident will be treated as if each incident had been separately reported, although the Service Provider can report on restoration of the overall incident. Furthermore, upon identification of such an incident, SITA expects the Service Provider to communicate the extent of such incident by identifying all links affected and communicating this to SITA.

D.10.3.4 Incidents must be managed according to the following process (and as illustrated in the diagram):

- a) Incidents detected by the Service Provider’s NMS must automatically be logged to the Service Provider’s ITSM system in accordance with paragraph D.10.3.2.
- b) All Incidents logged via the Service Provider’s NMS, when cleared, must be auto-resolved by the Service Provider’s NMS on the Service Provider’s ITSM system.
- c) Incidents that are not automatically logged by the Service Provider’s NMS to the Service Provider’s ITSM system, for whatever reason, must be logged to the Service Provider’s ITSM system by the Service Provider’s Service Desk agent.
- d) Incidents and Resolutions logged on the Service Provider’s ITSM system must be forwarded by the Service Provider to SITA’s ITSM system.
- e) Notifications of Incidents logged on SITA’s ITSM must be forwarded to the Service Provider’s ITSM system.
- f) A manual process that accommodates the logging of Incidents by SITA or End Users of the BB Service via email and telephone must be provided to ensure business continuity.



D.10.3.5 After the Resolution and/or restoration of each Major Incident (an Incident affecting 5 or more links); or an Incident affecting both Paths on Resilient or Fully Redundant Links; or an Incident lasting more than 24 (twenty-four) hours, the Service Provider shall provide a Root Cause Analysis report describing the Incident and the underlying root cause and the fix for the underlying problem. Such report to be provided to SITA within 5 (five) business days of the incident being resolved.

D.10.3.6 In the event of a failure in BB Services, it is important that the Service Provider provide a concise list of personnel that will need to be contacted. The Service Provider escalation matrix specified below is applicable in the event that there is unsatisfactory response to an Incident.

Service Provider Escalation Matrix			
Contact	Phone	Email	Elapsed Time
Service Desk Agent			Immediate
Service Desk Manager			30 Minutes
Services Manager			1 Hour
Senior Manager			2 Hours
Executive			3 Hours

D.11 Service Level Indicators

The Service Level indicators below apply to the BB Services described in section Annex A:

D.11.1 Incident Feedback

Description	Incident Feedback
After the initial logging of an Incident, feedback on Incidents is to be provided to SITA's ITSM system to ensure that SITA is aware of the progress of the Resolution in accordance with the Service Level Type of each Access Link.	For Basic Services – Every 24 hours For Resilient Services – Every 12 hour For Fully Redundant Services – Every 6 hours

D.11.2 Root Cause Analysis

Description	Incident Report and Root Cause Analysis
A report providing an analysis of the underlying root cause needs to be performed for all incidents that caused a Major Incident (i.e. for an Incident affecting 5 or more Access Links) or where requested by SITA.	within 5 business days of Incident closure

D.11.3 Link Availability

Description	Link Availability		
Links (Site; ITSM; ExpressRoute and FastConnect Links) must be available according to their Link Classification and Operational Window	Maximum Accumulated Downtime not to exceed the following periods depending on Link classification and Operational Window in any month.		
	Operational Window	Link Classification	Permitted Maximum Accumulated Downtime per month
	24 x 7	Basic Services (98%)	14 hours 36 minutes
		Resilient Services (99,5%)	3 hours 39 minutes
Fully Redundant Services (99,95%)		0 hours 22 minutes	

- D.11.3.1 Link Availability is measured by the NMS, by polling the Service Provider CPE at each Site/MeetMe port every 5 (five) minutes using pollers located at:
- a) the Service Provider access aggregation networking equipment at the SITA PE node, for Corporate Sites; or
 - b) the Service Provider’s access aggregation networking equipment at its Internet breakout location, for Non-Corporate Sites; or
 - c) the Service Provider’s CPE at the SITA data centre in Cape Town, for ExpressRoute and FastConnect Services.
- D.11.3.2 A service is deemed to be unavailable / down when all Access Links to the site/service are unavailable.
- D.11.3.3 A failure on either of the two Paths for Resilient or Fully Redundant Services (where the other Path is still available to carry traffic to and from the site) will be classified as a failure for a Basic Service on the affected Path for the purposes of Link Availability.
- D.11.3.4 For the purpose of calculating Downtime, the monthly report for link availability drawn from the Service Provider’s NMS will be the source of information.
- D.11.3.5 Downtime will be accumulated for all events where the Access Link/s to the site/service is/are unavailable according to the Service Provider’s NMS, and not only those logged as Incidents as defined in section D.10.3.
- D.11.3.6 No Downtime will accrue for Final Services at a Site where a Temporary Service has been installed by the Service Provider. Link Availability will instead be applied to the Temporary Service.
- D.11.3.7 Per paragraph D.5.3.1b) and D.5.4.5, failure to revert from the Interim Service or Temporary Service to the Final Service after 60 days (or other such period approved by SITA) will be deemed a Link Availability failure and service credits will accrue as per section D.12.
- D.11.3.8 Delays attributable to SITA during the Operating Window (e.g. access to Sites), will not be included in the calculation of Downtime.
- D.11.3.9 For Incidents that are not closed in the reporting month, downtime will be calculated as if the incident was closed at the end of the month and for the following and subsequent month(s) the incident reopened at the start of that month.

- D.11.3.10 Scheduled maintenance will be excluded from downtime provided that the Service Provider has informed SITA in accordance with Section D.10.
- D.11.3.11 A network security event leading to a service not being available will not be excused.
- D.11.3.12 Equipment failure leading to a service not being available will not be excused.
- D.11.3.13 For a cable break affecting Basic Service Links (or either of the two Paths for Resilient or Fully Redundant Services) an additional 24 hours will be permitted during the month that the cable break occurred. This additional 24-hour allowance will be added to the Maximum Accumulated Downtime for each and every link affected by such cable break, provided the cable break is substantiated with evidence provided by the Service Provider to SITA, and such evidence is accepted by SITA.
- D.11.3.14 For Sites with no backup power, no Downtime will accrue where the Site mains power is disrupted (including load-shedding).
- D.11.3.15 For Sites with backup power, power must remain available for any incident where Site mains power is disrupted (including load-shedding) for a continuous period up to 4,5 hours and where a 3,5-hour battery recharge period is available between power disruptions. Any Downtime during this period will be liable for Service Credits as above. Where the Site mains power is disrupted for a continuous period of 4,5 hours or longer, Service Credits will only accrue for Downtime during the first 4,5 hours.

D.11.4 NMS Availability

Description	NMS Availability
The Service Provider's NMS must be fully functional	The NMS must be functionally operational and reachable by the ITSM on the Application Layer (OSI Layer 7) for 99,99% of the time.

D.11.5 ITSM Availability

Description	ITSM Availability
The Service Provider's ITSM system must be fully functional	The ITSM system must be functionally operational and reachable by the NMS on the Application Layer (OSI Layer 7) for 99,99% of the time.

D.11.6 Request Management

Description	Time to implement
Service Requests are completed within the Time to Implement	Install BB Service at a Site (on the Additional Site List) The Installation Date for the Request to Install BB Service at a Site on the Additional Site List will be 90 Calendar Days after the date that the accepted Service Proposal was provided to the Service Provider. To mitigate any unforeseen risk during the installation of a BB Service at a Site, the Service Provider may, within 30 Calendar Days of the receipt of the accepted Service Proposal, elect to decline the Request to Install BB Service at a Site.
	Install New Cloud Access Service

Description	Time to implement
	The New Cloud Service Installation Date will be 90 Calendar Days after the date that the accepted Service Proposal was provided to the Service Provider.
	Install Backup Power The Backup Power Installation Date will be 60 Calendar Days after the date that the accepted Service Proposal was provided to the Service Provider.
	Swap Site between the Initial and Additional Site Lists The Swap Site Date will be one (1) Calendar Day, or other specified date, after both Parties have mutually agreed, in writing, to swap the Sites.
	Interim Service The Interim Services Date will be 30 Calendar Days after the date that the accepted Service Proposal was provided to the Service Provider.
	Replacement Service The Replacement Service Date will be 90 Calendar Days after the date that the accepted Service Proposal was provided to the Service Provider.
	Decommission BB Service The Decommission Date will be 5 Calendar Days after the date that the request is logged on the Service Provider's ITSM system.
	Upgrade bandwidth The Upgrade Date will be 48 hours after the date that the request is logged on the Service Provider's ITSM system.
	On-premises Movement of BB Service The On-premises Movement Date will be 20 Calendar Days after the date that the accepted Service Proposal was provided to the Service Provider.
	Relocation of BB Service The Relocation Date will be 90 Calendar Days after the date that the accepted Service Proposal was provided to the Service Provider.
	Change in Service Level Type The Change in Service Level Date will be 90 Calendar Days after the date the accepted Service Proposal was provided to the Service Provider.

D.11.7 Throughput Line Capacity

Description	Throughput Line Capacity
<p>For Corporate Sites: Throughput capacity between a Site and a SITA provider edge (PE) node.</p> <p>For Non-Corporate Sites: bandwidth capacity between the Service Provider's CPE and the Service Provider's access aggregation networking equipment at its Internet breakout location.</p> <p>For ExpressRoute: Throughput capacity between the CPE at the SITA data centre in Cape Town and the CPE at the closest Microsoft Azure ExpressRoute "Meet Me" port.</p> <p>For FastConnect: Throughput capacity between the CPE at the SITA data centre in Cape Town and the CPE at the closest Oracle FastConnect "Meet Me" port.</p>	<p>Must be greater than or equal to 90% of the contracted bandwidth capacity.</p>

- D.11.7.1 A Throughput Line Capacity test for Corporate Sites is measured by comparing -
- a) the average bits transferred per second with a Maximum Transmission Unit (MTU) size of 1500 bytes –
 - i. to the CPE from the closest SITA PE node; and
 - ii. from the CPE to the closest SITA PE node;to-
 - b) the provisioned bandwidth capacity (download and upload as per paragraph D.1.2.3 and D.6.2.17)
- D.11.7.2 A Throughput Line Capacity test for Non-Corporate Sites is measured by comparing -
- a) the average bits transferred per second with a Maximum Transmission Unit (MTU) size of 1500 bytes –
 - i. to the CPE from the Service Provider's access aggregation networking equipment at its Internet breakout location; and
 - ii. from the CPE to the Service Provider's access aggregation networking equipment at its Internet breakout location;to-
 - b) the provisioned bandwidth capacity (download and upload as per paragraph D.1.2.3 and D.6.2.17)
- D.11.7.3 A Throughput Line Capacity test for the ExpressRoute and the FastConnect Service is measured by comparing -
- a) the average bits transferred per second with a Maximum Transmission Unit (MTU) size of 1500 bytes –
 - iii. to the Service Provider's CPE located at the (ExpressRoute or FastConnect) MeetMe port from the Service Provider's CPE at the SITA data centre in Cape Town; and
 - iv. from the Service Provider's CPE located at the (ExpressRoute or FastConnect) MeetMe port to the Service Provider's CPE at the SITA data centre in Cape Town;to-
 - b) the provisioned bandwidth capacity (download and upload as per paragraph D.1.2.3 and D.6.2.17)
- D.11.7.4 The Service Provider must conduct testing of throughput line capacity on a monthly basis at all Sites connected on Wireless technologies (apart from Best Effort Services) including Microwave; Point-to-point; Point-to-multipoint; Fixed Satellite; or Other wireless technology used by the Service Provider in the delivery of the BB Services.
- D.11.7.5 For testing of throughput line capacity on fibre technology, SITA will request the Service Provider to test links on an ad-hoc basis. If testing can only be conducted on-Site then SITA may only request a maximum of 20 on-Site tests per month. The Service Provider must report the outcome/results of the testing of throughput line capacity on fibre technology within 48 hours of such request for testing by SITA.

D.11.7.6 Where throughput line capacity testing is not performed as scheduled, the links not tested shall be deemed to have failed the throughput line capacity test and will entitle SITA to raise the associated Service Credits per paragraph D.12.1.

D.11.7.7 The Service Provider must conduct testing of Throughput Line Capacity on a monthly basis for all technology types apart from Best Effort Services.

D.11.8 Secondary Link to Aggregated Link

Description	Secondary Link to Aggregated Link
Where 15 or more links to Sites are being aggregated, a secondary link to the aggregated link must be provided (per paragraph D.6.2.10).	Secondary link at same capacity and not on the same route.

D.11.9 Maximum Transmission Unit

Description	MTU
After every Change on the network, the Service Provider must confirm the Maximum Transmission Unit (MTU) size between each affected Site and the SITA PE node.	MTU size of 1500 bytes

D.11.10 Latency

Description	Latency														
Roundtrip Latency	<p>99% of all test packets have a roundtrip latency less than a total roundtrip time specified as per the table below and measured when Path capacity utilisation is not higher than 70%.</p> <table border="1"> <thead> <tr> <th>Link type</th> <th>Measured roundtrip delay less than or equal to:</th> </tr> </thead> <tbody> <tr> <td>Fibre</td> <td>40 milliseconds</td> </tr> <tr> <td>Microwave wireless</td> <td>40 milliseconds</td> </tr> <tr> <td>Point-to-point radio wireless</td> <td>40 milliseconds</td> </tr> <tr> <td>Point-to-multipoint radio wireless</td> <td>40 milliseconds</td> </tr> <tr> <td>Fixed Satellite</td> <td>700 milliseconds</td> </tr> <tr> <td>Other</td> <td>SITA may in special cases specify a metric on a case-by-case basis.</td> </tr> </tbody> </table>	Link type	Measured roundtrip delay less than or equal to:	Fibre	40 milliseconds	Microwave wireless	40 milliseconds	Point-to-point radio wireless	40 milliseconds	Point-to-multipoint radio wireless	40 milliseconds	Fixed Satellite	700 milliseconds	Other	SITA may in special cases specify a metric on a case-by-case basis.
Link type	Measured roundtrip delay less than or equal to:														
Fibre	40 milliseconds														
Microwave wireless	40 milliseconds														
Point-to-point radio wireless	40 milliseconds														
Point-to-multipoint radio wireless	40 milliseconds														
Fixed Satellite	700 milliseconds														
Other	SITA may in special cases specify a metric on a case-by-case basis.														

D.11.10.1 Latency is a measure of “delay time” in the delivery of packets of data sent across a network.

D.11.10.2 Latency is measured by sending two test packets of 100 bytes every 5 (five) minutes, 24 hours a day between the Service Provider CPE at each Site/MeetMe port and:

- a) the Service Provider access aggregation networking equipment at the SITA PE node for Corporate Sites.
- b) the Service Provider’s access aggregation networking equipment at its Internet breakout location for Non-Corporate Sites.
- c) the Service Provider’s CPE at the SITA data centre in Cape Town, for ExpressRoute and FastConnect Services.

D.11.10.3 The time difference between a test packet being sent and acknowledgement of receipt at its origin will be measured in milliseconds (ms). The Latency of test packets sent is only recorded if a response is returned, i.e. the Roundtrip Latency is only measured during periods when the Link is available.

D.11.10.4 If Latency per Site (ms) = Time taken for acknowledgement of receipt at the point of delivery to be received at the point of origin, then:

$$\text{Average RTD per Site (ms)} = \frac{\Sigma \text{RTD of all Test Packets sent and acknowledged in a month}}{\text{Number of Test Packets sent and acknowledged in a month}}$$

D.11.10.5 For each link, the Service Provider will monitor the Latency during a Calendar Month and calculate the Average Latency per Site, which may not be greater than the metric per the table above, and report this to SITA.

D.11.10.6 The Service Provider must conduct testing of Latency on a monthly basis for all technology types apart from Best Effort Services.

D.11.11 Jitter (for Corporate Sites only)

Description	Jitter														
Roundtrip Jitter	<p>99% of all test packets have a roundtrip jitter less than a total roundtrip time specified as per the table below and measured when Path capacity utilisation is not higher than 70%.</p> <table border="1"> <thead> <tr> <th>Link type</th> <th>Measured Interval jitter less than or equal to:</th> </tr> </thead> <tbody> <tr> <td>Fibre</td> <td>30 milliseconds</td> </tr> <tr> <td>Microwave wireless</td> <td>30 milliseconds</td> </tr> <tr> <td>Point-to-point radio wireless</td> <td>30 milliseconds</td> </tr> <tr> <td>Point-to-multipoint radio wireless</td> <td>30 milliseconds</td> </tr> <tr> <td>Fixed Satellite</td> <td>60 milliseconds</td> </tr> <tr> <td>Other</td> <td>SITA may in special cases specify a metric on a case-by-case basis.</td> </tr> </tbody> </table>	Link type	Measured Interval jitter less than or equal to:	Fibre	30 milliseconds	Microwave wireless	30 milliseconds	Point-to-point radio wireless	30 milliseconds	Point-to-multipoint radio wireless	30 milliseconds	Fixed Satellite	60 milliseconds	Other	SITA may in special cases specify a metric on a case-by-case basis.
Link type	Measured Interval jitter less than or equal to:														
Fibre	30 milliseconds														
Microwave wireless	30 milliseconds														
Point-to-point radio wireless	30 milliseconds														
Point-to-multipoint radio wireless	30 milliseconds														
Fixed Satellite	60 milliseconds														
Other	SITA may in special cases specify a metric on a case-by-case basis.														

D.11.11.1 Jitter is a measure of variance (phase difference) in the delay (latency) of the delivery of packets of data sent across a network. At the sending side, packets are sent in a continuous stream with the packets spaced evenly apart. Due to network congestion, improper queuing, or configuration errors, this steady stream can become inconsistent, or the delay between each packet can vary instead of remaining constant. Jitter is therefore statistical variation in latency. It is especially important in determining the quality of voice traffic across a network.

D.11.11.2 The Service Provider will measure end-to-end performance by sending sets of 10 test 80 byte packets with 20ms spacing, every minute, 24 hours a day between the Service Provider CPE at each Site and the Service Provider access aggregation networking equipment at the SITA PE node.

D.11.11.3 Jitter is measured as the difference in milliseconds (ms) in spacing of the packets on receipt.

$$\text{Average Jitter per Site (ms)} = \frac{\Sigma \text{phase difference of all Test Packets sent in a month}}{\text{Number of Test Packets sent in a month}}$$

- D.11.11.4 For each Access Link the Service Provider will calculate an average Jitter measurement over each Calendar Month for all sets of test packets sent between the Service Provider access aggregation networking equipment at the SITA PE node and the Service Provider CPE at each Site, which may not be greater than the metric per the table above, and report this to SITA.
- D.11.11.5 The Service Provider must conduct testing of Jitter on a monthly basis for all technology types apart from Best Effort Services.

D.11.12 Packet Loss

Description	Packet Loss
Packet Loss	A maximum of 1% of all test packets are lost across each Access Link and measured when Path capacity utilisation is not higher than 70%.

- D.11.12.1 Packet Loss is a measure of the reliability of delivery of packets of data sent across a network, in terms of packets sent but not delivered.
- D.11.12.2 Packet Loss is measured by sending two test packets of 100 bytes every 5 (five) minutes, 24 hours a day between the Service Provider CPE at each Site/MeetMe port and:
- The Service Provider access aggregation networking equipment at the SITA PE node for Corporate Sites; or
 - the Service Provider's access aggregation networking equipment at its Internet breakout location for Non-Corporate Sites; or
 - the Service Provider's CPE at the SITA data centre in Cape Town, for ExpressRoute and FastConnect Services.
- D.11.12.3 If a device sends a test packet for which it does not receive a response, that test packet is considered to be lost. The number of test packets lost is calculated as a percentage of the number of packets sent.

$$Packet\ Loss\ (\%) = \left(\frac{\sum Test\ Packets\ Lost\ in\ a\ month}{\sum Test\ Packets\ Sent\ in\ a\ month} \right) \times 100$$

- D.11.12.4 For each link, the Service Provider will calculate the Packet Loss percentage over each Calendar Month, which may not be less than the guaranteed metric, and report this to SITA.
- D.11.12.5 The Service Provider must conduct testing of packet loss on a monthly basis for all technology types apart from Best Effort Services.

D.11.13 Delivery of Service Level Indicator Report

Description	Delivery of Service Level Indicator Report
Delivery of Service Level Indicator Report	The monthly Service Level Indicator report must be delivered within 5 (five) business days after the end of the month

D.11.14 Delivery of Internet Statistics Log Report (for Non-Corporate Sites)

Description	Delivery of Internet Statistics Log Report
Delivery of the Internet Statistics Log Report (for Non-Corporate Sites only)	The monthly Internet Statistics Log Report must be delivered within 5 (five) business days after the end of the month

D.11.15 Management of meeting attendance

Description	Management of meeting attendance
Management of meeting attendance	Service Provider personnel must attend all meetings per Annexure H - Governance (weekly, monthly and ad hoc).

D.11.15.1 Stand-in attendees must be communicated to SITA timeously and a stand-in attendee cannot already be an attendee at the scheduled meeting and any such stand-in attendee must have the same authority as the original attendee.

D.12 Service Credits

D.12.1 Calculation of Service Level Indicator Credits

D.12.1.1 Should the Service Provider fail to meet the minimum Service Levels, then remedial actions may be taken.

D.12.1.2 In the event of underperformance against any of the Service Level Indicators, SITA shall be entitled to receive Service Credits as specified below. The actual raising and receipt of Service Credits will be at SITA's discretion.

D.12.1.3 Service Credits will be calculated on a monthly basis and included in the Monthly Service Level Indicator Report per section D.13.

D.12.1.4 The below variables are applicable to the formulas used in the below table:

A = individual link Monthly Recurring Charge (MRC).

N = number of instances that the service level is breached on each individual link

T = total monthly charge for all BB Services at all Sites

EH = extra hour(s) or part thereof beyond the permissible maximum accumulated downtime.

ED = extra day(s) beyond the maximum permissible delivery date or agreed date.

SD = System (NMS or ITSM) Downtime calculated by multiplying the percentage of downtime (or part thereof rounded up to the nearest whole integer) by 100. For example, if the NMS system was down for 5,8% of the month, the SD = 6% * 100 = 6.

Indicator	Metric	Service Credit
Incident Feedback (IF)	The Service Provider will provide feedback in accordance with the link classification as follows: <ul style="list-style-type: none"> for Basic Services every 24 hours; 	1% of the monthly service charge for each instance on the affected link for which feedback

Indicator	Metric	Service Credit										
	<ul style="list-style-type: none"> for Resilient Services every 12 hours; for Fully Redundant Services every 6 hours 	<p>is not given in accordance with the classification.</p> <p>SC Formula IF = $N * (A * 1\%)$</p>										
Root Cause Analysis (RCA)	Report to be delivered within 5 business days.	<p>2% of the monthly service charge on each affected link for each instance where the root cause analysis report is not delivered within 5 business days of incident closure.</p> <p>SC Formula RCA = $N * (A * 2\%)$</p>										
Link Availability (LA)	The following tables detail the Maximum Accumulated Downtime in the month for each Class of Service and Operational Window.	<p>After the permitted Maximum Accumulated Downtime has been reached, a 5% service credit is payable, and thereafter for every 1 hour of downtime or part thereof, an additional 1% Service Credit will be payable.</p> <p>SC Formula LA = $(A * 5\%) + (A * 1\% * EH)$</p> <table border="1" data-bbox="539 1099 1339 1357"> <thead> <tr> <th data-bbox="539 1099 748 1211">Operational Window</th> <th data-bbox="748 1099 1034 1211">Link Classification</th> <th data-bbox="1034 1099 1339 1211">Permitted Maximum Accumulated Downtime per month</th> </tr> </thead> <tbody> <tr> <td data-bbox="539 1211 748 1245" rowspan="3">24 X 7</td> <td data-bbox="748 1211 1034 1245">Basic Services</td> <td data-bbox="1034 1211 1339 1245">14 hours 36 minutes</td> </tr> <tr> <td data-bbox="748 1245 1034 1279">Resilient Service</td> <td data-bbox="1034 1245 1339 1279">3 hours 39 minutes</td> </tr> <tr> <td data-bbox="748 1279 1034 1357">Fully Redundant Services</td> <td data-bbox="1034 1279 1339 1357">0 hours 22 minutes</td> </tr> </tbody> </table>	Operational Window	Link Classification	Permitted Maximum Accumulated Downtime per month	24 X 7	Basic Services	14 hours 36 minutes	Resilient Service	3 hours 39 minutes	Fully Redundant Services	0 hours 22 minutes
Operational Window	Link Classification	Permitted Maximum Accumulated Downtime per month										
24 X 7	Basic Services	14 hours 36 minutes										
	Resilient Service	3 hours 39 minutes										
	Fully Redundant Services	0 hours 22 minutes										
ExpressRoute Link Availability (ERLA)	Maximum Accumulated Downtime in the month of 0 hours 22 minutes.	<p>After the permitted Maximum Accumulated Downtime has been reached, a 10% service credit is payable, and thereafter for every 1 hour of downtime or part thereof, an additional 5% Service Credit will be payable.</p> <p>SC Formula ERLA = $(A * 10\%) + (A * 5\% * EH)$</p>										
FastConnect Link Availability (FCLA)	Maximum Accumulated Downtime in the month of 0 hours 22 minutes.	<p>After the permitted Maximum Accumulated Downtime has been reached, a 10% service credit is payable, and thereafter for every 1 hour of downtime or part thereof, an additional</p>										

Indicator	Metric	Service Credit
		5% Service Credit will be payable. SC Formula FCLA = (A * 10%) + (A * 5% * EH)
NMS Availability (NMSA)	99,99% Availability.	1% of the total monthly fees shall be payable for each percentage point or part thereof for which the NMS is not available SC Formula NMSA = T * 1% * SD
ITSM Availability (ITSMA)	99,99% Availability.	1% of the total monthly fees shall be payable for each percentage point or part thereof for which the ITSM is not available SC Formula ITSMA = T * 1% * SD
Request Management (RM)	Failure to deliver requested service by specified delivery date.	5% of the relevant site's MRC for every day the Service Request is not fulfilled within the Time to Implement. SC Formula RM = A * 5% * ED
Throughput Line Capacity (TLC)	Failure to meet throughput line capacity threshold of 90% of the contracted bandwidth capacity	50% of the monthly service fee of the affected link for which the throughput line capacity metric is not met. SC Formula TLC = A * 50%
Secondary link to aggregated link (SLAP)	No secondary link; or secondary link not at same capacity; or secondary link on the same route	1% of the total monthly fees shall be payable for every month that the secondary link has not been provisioned as required SC Formula SLAP = T * 1%
Maximum Transmission Unit (MTU)	MTU size not equal to 1500 bytes	30% of the monthly service fee of the affected link for which the MTU size is not correct. SC Formula MTU = A * 30%

Indicator	Metric	Service Credit
Latency (L)	Failure to meet specified Latency threshold of 99%	30% of the monthly service fee of the affected link for which the latency measure is not met. SC Formula L = A * 30%
Jitter (J)	Failure to meet specified Jitter threshold of 99%	30% of the monthly service fee of the affected link for which the jitter measure is not met. SC Formula J = A * 30%
Packet Loss (PL)	More than of 1% of test packets are lost	30% of the monthly service fee of the affected link for which the packet loss measure is not met. SC Formula PL = A * 30%
Delivery of Service Level Indicator Report (SLIR)	The Service Level Indicator Report must be delivered to SITA within 5 (five) business days after the end of the month	1% of the total monthly fees shall be payable for each business day or part thereof for which delivery is later than the 5 th business day following the applicable reporting month SC Formula SLIR = T * 1% * ED
Delivery of Internet Statistics Log Report (ISLR)	The Internet Statistics Log Report must be delivered to SITA within 5 (five) business days after the end of the month	1% of the total monthly fees shall be payable for each business day or part thereof for which delivery is later than the 5 th business day following the applicable reporting month SC Formula ISLR = T * 1% * ED
Management of meeting attendance	Failure to meet the threshold for Service Provider personnel attending all meetings (weekly, monthly and ad hoc)	0.25% of the total monthly fees MoMA Formula = T * 0.25%

D.12.1.5 The Service Provider will calculate the respective service credits and include these in the monthly Service Level indicator Report.

D.12.1.6 SITA in its sole discretion may waive certain Service Credits upon motivation from the Service Provider (excused performance).

D.12.2 Calculation of Milestone Delivery Credits

D.12.2.1 If the Service Provider fails to deliver any Site on the Initial Site List by the agreed Milestone Date (as per Annexure C), then SITA shall be entitled to receive Milestone Delivery Credits.

- D.12.2.2 For every day that the Site on the Initial Site List is delivered after the Milestone Date, the Service Provider must provide SITA with a credit for 5% of the relevant Site's MRC amount which would have been payable if the Site had been delivered on the Milestone Date.
- D.12.2.3 $MDC Formula = A * 5\% * ED$; where A = individual link monthly service charge; and ED = extra day(s) beyond the Milestone Date
- D.12.2.4 Only once the Service Handover Process for the Site has been completed, may the MRC be charged for such Service provided that all credits as referred to above have been passed to SITA by the Service Provider;
- D.12.2.5 The Service Provider will calculate the respective Milestone Delivery Credits on a monthly basis and include these in the monthly Service Level indicator Report.
- D.12.2.6 SITA in its sole discretion and via the Broadband Steering Committee may waive certain Milestone Delivery Credits upon motivation from the Service Provider (excused performance).

D.13 Reporting

D.13.1 Reporting Portal

- D.13.1.1 The Service Provider must provide an online Reporting Portal for SITA to access real-time and historical information (for up to 2 years) for each Non-Corporate Site and for each of the VPN's for Non-Corporate Sites.
- D.13.1.2 The following information must be displayed in the most appropriate manner using graphs and/or tables and must be downloadable in .csv and .pdf format:
 - a) bandwidth utilisation for a current day up to the last 5 minutes, and customisable to display peak daily traffic bandwidth utilisation on a weekly, monthly, 6-monthly and last 12-month basis on a revolving window.
 - b) data consumption for a current day, and customisable to display total daily data consumption on a weekly, monthly, 6-monthly and last 12-month basis on a revolving window.
 - c) top 20 URLs per data download size for a current day, and customisable to display top URL's per data download size on a weekly, monthly, 6-monthly and last 12-month basis on a revolving window.
 - d) top 20 URLs per page view for a current day, and customisable to display top URL's per page view on a weekly, monthly, 6-monthly and last 12-month basis on a revolving window.
- D.13.1.3 All information must be downloadable from the Reporting Portal in .csv and .pdf format.
- D.13.1.4 Data displayed on the Reporting Portal will be reviewed periodically as the service evolves, and SITA reserves the right to request reporting enhancements.

D.13.2 Reports

- D.13.2.1 The primary purpose of reporting is to provide detail concerning the Service Provider's activities relating to all aspects of the BB Services.
- D.13.2.2 In order to facilitate accurate reporting, information about BB Services at Sites must be updated in Annexure C and recorded on the approved site management information system.

D.13.2.3 The Service Level Indicator Report is required to be delivered monthly to SITA in Word and PDF format by 8AM of the 5th (fifth) business day after the end of the reporting month, as per paragraph D.11.13, and includes the following information for the preceding month:

- a) a comprehensive report on every Service Level Indicator in section D.11 including detail explaining underperformance.
- b) Service Level Trends
- c) Outstanding problems
- d) Invoicing
- e) Service Credits
- f) Areas for improvement and improvement recommendations
- g) Any root cause analysis report produced during the month
- h) Other issues

D.13.2.4 The Internet Statistics Log Report (for Non-Corporate Sites only) is required to be delivered monthly to SITA in Word and PDF format by 8AM of the 5th (fifth) business day after the end of the reporting month, as per paragraph 0, and includes the following statistics for the preceding month per VPN:

- a) a graph of peak daily bandwidth utilisation
- b) data consumption for the top 50 sites
- c) top 50 URLs per size
- d) top 50 URLs per page view

D.13.2.5 The following scheduled reports are required and should be sent by email to SITA, and stored electronically by the Service Provider in a cloud-based location that is accessible by SITA:

Report Type	Report Format	Description
Milestone Delivery Progress Report	Email; .csv	Daily (by 8AM of each morning) report indicating the number of sites handed over and associated bandwidth speeds. SITA may request additional information to be included in this report.
Project Dashboard Report	PowerPoint	Weekly (by 8AM on the first Business Day of the following week) report summarising progress against milestone targets, key risks and mitigations. SITA may request additional information to be included in this report.
Other	Email, Word, PDF, Excel, PowerPoint (as requested)	Other (as agreed between the parties) e.g. bi-weekly; quarterly.

D.13.2.6 SITA may request Ad Hoc reports from the Service Provider related to the BB Services in specific formats from time to time (e.g., financial reports; improvement reports; narrative reports etc.).