Service Offer Reference No: RM3808-Lot 1-NorthPB-00016

Lot(s): Lot 1 Network Access Services

Service Offer Effective Date: 16/02/2022

Service Offer Expiry Date: 21/03/2022

Service Description: Leased Line Wide Area Network

Leased Line Wide Area Network

North offer a wide range of variants for WAN connectivity including managed and wires-only options, fibre, copper and all DSL access technologies (FFTP, FTTC), centralised breakout from your WAN or point to point connections as well as a number of backup and resilience options.

To ensure a successful bid, North partner with all major carriers and vendors in the UK so that we can provide market leading services to our customers at a commercial price that remains competitive and supportive of our customers budgets.

The solution as detailed in this SO would suit a large organisation with multiple, disparate sites. North is proposing a range of single leased line connections to office type premises from the local exchange using multiple carrier's dependant on best price, service and delivery timescales. The services in listed within the price card are based on distance and location size depending on the performance requirement.

Partnering with North has the benefit to overlay additional services as this will be privately connected to market-leading UC, SIP and Cloud solutions.

The following information provides a high-level overview for various WAN Access Technologies.

Access Technologies
North have selected a number of different access technologies in order to tailor the circuit type to the requirements of each individual office. Access Technologies are, in ascending throughput capability:

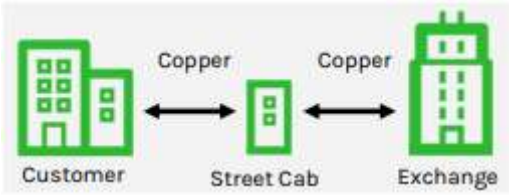
- ADSL/ADSL2+ (contended)
- FTTC (contended)
- EFM – Ethernet First Mile
- Fibre – 10Mb/100Mb/1Gb/10Gb bearer

ADSL
For small sites and home-workers the almost universally available ADSL broadband connections provided via BT's industry leading 21st Century Network is the most cost-effective connectivity solution. As part of the UK national network a site can be connected

directly, securely and privately into the MPLS network making small offices & home-workers part of the private MPLS WAN or alternatively can be provided as a direct internet-access circuit.

The performance of an ADSL connection will depend upon the sites location – in particular the length/quality of the PSTN line. In most urban & suburban areas the local exchanges now provide ADSL2+ services which achieve up-to 20Mbps on some short lines, with typical speeds for most users being in the 10-15Mbps range on good lines, falling to a just few Mbps on long/poor lines.

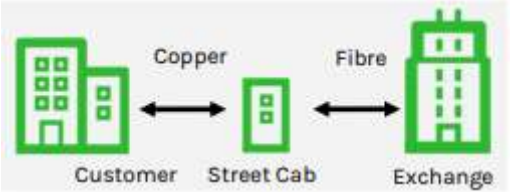
In some rural and other less populated areas, the local exchanges have not yet been upgraded to ADSL2+ and they currently only provide ADSL Max up-to 8Mbps services. In these more dispersed areas the majority of users will be on medium-long lines where, there's little difference between the speeds achieved by ADSL Max or ADSL2+, so in practice most users on these exchanges won't be overly disadvantaged by not currently being able to have ADSL2+ services.



FTTC

In many proposed locations, and as part of an ongoing national roll-out, Fibre to the Cabinet (FTTC) services are now available. By placing the broadband electronics in street cabinets, closer to the site, the broadband performance can be significantly enhanced. The system uses Very High-Speed ADSL technology between the site and the street cabinet. The cabinet is then connected to high-capacity fibre linking it, through the local exchange, onward to the national network. The much shorter copper line not only has much higher performance but should also be more reliable.

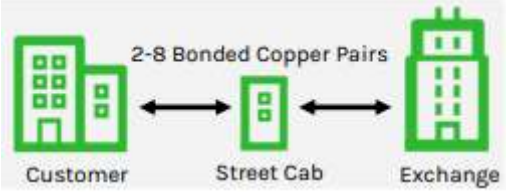
FTTC can deliver speeds up to 80Mbps and also has increased upstream performance of up to 20Mbps making it suitable for higher throughput requirements. A BT PSTN phone line is a pre-requisite for an FTTC service which we've included in our pricing.



EFM - Ethernet in the First Mile

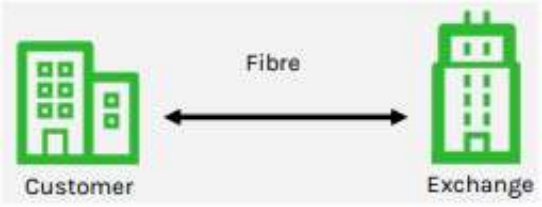
EFM uses the same local copper cable infrastructure as PSTN phone lines and so is widely available. It combines multiple, dedicated copper pairs into a single data service delivering a higher capacity copper data connection than Broadband. EFM performs technically and contractually as the equivalent of a fibre Ethernet service. EFM does not need, nor does it provide, a PSTN phone service.

The EFM service gives a dedicated connection of between 3Mbps to 20Mbps symmetrical depending upon line length and provides an uncontended service. In many instances EFM has been overtaken by GEA connectivity as it provides higher throughput at lower cost with an identical service availability and fault resolution time.



Fibre Circuits

Fibre Ethernet access circuits are available in bearer sizes of 10Mbps, 100Mbps, 1Gbps and 10Gbps with fractional committed bandwidths e.g., 2Mbps over 10Mbps circuit / 200Mbps over 1Gbps circuit. Additionally, circuits can be specified as resilient access using multiple tails and multiple PoPs to increase service availability. Fibre circuits and resilient variations carry the highest levels of service availability and the shortest fault resolution times.



Solarwinds

North will provide 'read' access to the 'Netview Portal' (based on Solarwinds Orion management software). The information available through the portal is an identical view to that used by North engineers for fault handling.

Netview provides access to real-time and historical performance monitoring and fault management directly from any web browser. The comprehensive alert engine and event monitor help identify network problems, keeping outages and downtime to a minimum. The web based views are fully customisable and web accounts can be limited based on department, geographic area, customer ID or any user defined field. Web enabled maps provide a real time pictorial status of the network topology with the ability to click and drill into regions, departments and devices.

The Netview system monitors the following in real-time:

- Network and circuit availability
- Network Latency
- Bandwidth utilisation
- Interface errors and discards
- CPU and memory utilisation
- Volume usage
- Node, interface and volume status
- Buffer usage and errors

The WAN Router CPE's included for each service are all state-of-the-art Cisco Router CPE's; although alternatively we can provide an equivalent Huawei Router CPE option

if we feel it would also be fit for purpose; all options given are standard product sets that will be matched to specific WAN Access circuit types.

All Cisco Routers will be provided with the latest IOS version recommended by Cisco at the time of the installation. These will be maintained and fully managed by our Service Desk & NOC and will be kept compliant to latest Cisco PSRT directives. The Routers will be configured using standards based BGP Dynamic Routing protocols to facilitate WAN routing, resilience and LAN / WAN redundancy.

The proposed Managed WAN Architecture will be built as private and only accessible by authorised users for management as per our operational security directives.

Conditions on the Buyer:

The following conditions must be met by the Contracting Body prior to this Lot 1 SO being a valid offer.

- Must be a UK delivery address
- Minimum term is 12 months
- Security clearances have not been accounted for and will need to be advised by the contracting body as appropriate
- Contracting body to provide precise termination details for the new Internet Service.
- Contracting body will provide an installation environment suitable for indoor, office grade ICT hardware (space required in communication cabinet)
- Within the communication cabinet, there will be a 13amp socket required for connection of the new router
- Contracting body are responsible for connecting the new circuit into the existing network.
- Lead times are subject to survey by the service provider.
- Our programme is based on clear and uninterrupted access during normal working hours (Monday – Friday 08:0 – 18:00)
- Payment terms strictly 30 days from date of invoice
- Unlimited Proactive Remote Incident Management – Based on SLA1
- Unlimited Proactive Remote Fault Management – Based on SLA1
- Unlimited Onsite on qualification of an Incident – Based on SLA1 – Next Business Day
- Access to customer existing Monitoring Software such as SolarWinds where available

Outline Implementation Plan:

The following is a draft implementation plan in respect of this SO.

The plan identifies the activities, resources, and dependencies applicable to delivery of this service.

The plan stages are described below.

Agree Terms (if different to Call Off)
Client-specific requirements will be discussed and agreed if they are different to those in the Call Off agreement. Examples of client specific requirements include route design for separation and different protocols.

Requirement of the Client
Prior to installation at the client's site, the client must confirm the room termination details and verify the cabling rackspace infrastructure is in place and ready for use. Readiness of the cabling infrastructure includes, but is not limited to, availability of some or all the following.

- Client equipment to connect to either end of the circuit
- Cabinet space
- Patching
- Power
- Lighting
- Environmental control

Circuit Installation
Once our Provisioning Team have all the necessary site details to place a fully detailed order for a site, the carrier will undertake a survey to confirm the work needed to install the new service. This survey should identify if the standard lead-time can be met or if any additional work is required that adds cost and/or extends the lead-time. If wayleaves are required, the lead-time can be open ended. When delays cause an unacceptable impact to the solution we work with the client and our supply partners to escalate where possible and/or facilitate alternatives.

Testing
A set of tests will be undertaken to confirm that the solution is operating in accordance with the design specification and any performance criteria agreed with the client.

A failure at this stage would be given a severity level and would trigger a sequence of troubleshooting steps to isolate the cause of the failure. If the cause is identified as a client-side issue, we will report our findings and await resolution. If the cause is related to our equipment or services, we will submit a resolution plan for approval. Depending on the severity of the failure and time to resolve, a modification to the implementation program may be required.

When we are comfortable that the network is performing as expected, we will provide a Handover Certificate for approval by the Client.

Following successful completion of the last testing milestone, the network will be deemed ready for service and the client will be invited to connect their production equipment. This is sometimes referred to as the 'handover' stage and from this point forward the service is available for use.

Project Coordination
North has successfully implemented projects for many years to a wide and diverse range of both private and public-sector clients. North has the requisite knowledge and experience to fully understand our client's requirements and to converse with key stakeholders at both an operational and a business level. North delivers its projects based on the industry's best-practice methodology – PRINCE2. Using components of PRINCE2 allows North to provide

a flexible approach for which its practices are constantly shaped by the lessons learned from the delivery of previous contracts.

North will play a 'hands-on' role in the delivery of the programme of works using its established project coordination methodology.

North firmly believes that to achieve the successful delivery of a project then strong project coordination is a critical factor to that success. Projects bring together many components that can be complex in nature and therefore require a comprehensive framework that maintains focus on meeting the business objectives and providing the required benefits that initiated the project.

A Project coordinator is assigned to 'own' and have responsibility for a project for the whole of the project lifecycle from order acceptance to completion.

Service Level Agreement:

The support of the Service is coordinated by North using fully trained personnel and network management facilities designed to ensure the continuity of service.

North Service Desk
North have a 24x7x365 ITIL Service Desk based in our Head Office in St Asaph. From here all client incidents are logged with the Service Desk either by telephone or email and given a unique reference number which the client is advised, then logged and time stamped electronically to ensure accuracy of reporting. The system will record all updates and closures; calls are also monitored and have automatic escalation triggers for calls approaching SLA deadlines.

Once calls are logged with the North Service Desk, the SLA clock starts and a suitably trained engineer will confirm the fault and either fix remotely, attend site within the SLA agreed or ship to site the required part depending on the client request.

Clients will be updated either by Email or telephone with all progress of calls on a regular basis.

North Standard SLA Offering

North will offer the following types of services levels based on the time that ticket is raised and severity of incident.

SLA1 - Mon-Fri 08:00 – 18:00 –1st Line remote support North will take all calls relating to LAN and Wireless into the North Helpdesk, the calls need to come from the customers Internal IT Team and not the end user.

SLA2 - Mon-Thurs 17:00 – 08:30 – 3rd Line engineer will be alerted out of hours of any critical incidents within the environment and initiate the resolution to the incident
(b) instigate any hardware replacement
(c) be available for business-critical incident to the internal team.

SLA3 - Friday 17:00 – Monday 08:30 – 3rd Line engineer will be alerted out of hours of any critical incidents within the environment and initiate the resolution to the incident
(b) instigate any hardware replacement
(c) be available for business-critical incident to the internal team.

Incident Categories

On receiving a request from the customer, the North Team will review the requirement and categorise the requirement based on the following criteria:

Incident Assessment Matrix:

Affect	Business Impact			
	Minor	Mod	Major	Critical
System/ Service Down	P3	P2	P1	P1
System/ Service Affected	P4	P3	P2	P1
User Down/Affected	P5	P4	P3	P2

Priority 1 (P1)

At this priority level both North and the customer must commit to round-the-clock response times and involvement by all necessary and appropriate personnel/systems until a mutually agreeable workaround is provided and the priority is no longer considered to be P1. North classify all P1 Incidents as Major Incidents (MI).

Examples of a P1 incident are service impacting and may include; server, node, system or cluster is down, unable to serve data, is in a state of frequent or repeating crash, hang, or is in a state of degraded performance sufficient to prevent critical business operations.

Priority 1 (P1A) - Out of hours Remote Support (SLA2&3): This service will only be open to Priority 1, which will be further defined with the customer IT Team. The support will be remote only. SLA – 60 minutes response

Priority 2 (P2)

At this priority level, North is committed to a commercially reasonable effort to provide a workaround and/or restore normal operations as quickly as possible during Normal Business Hours (SLA1).

Priority 3 (P3)

At this priority level, North will, during Normal Business Hours (SLA1), work towards a viable and mutually agreeable workaround or propose an upgrade or replacement to mitigate the problem.

Priority 4 (P4)

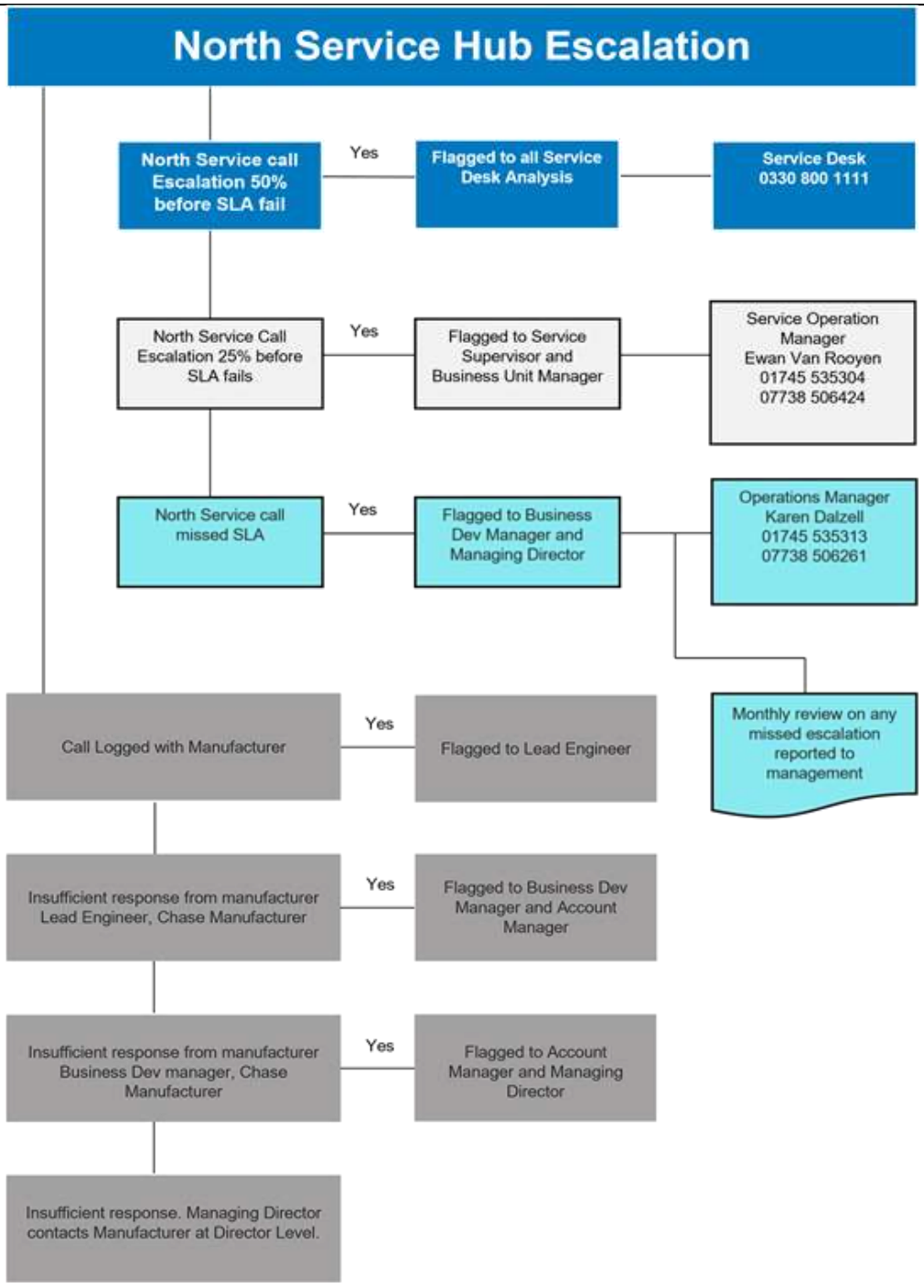
At this priority level, North will, during Normal Business Hours (SLA1), provide advice on whether a workaround, upgrade or replacement to mitigate an issue is available.

Priority 5 (P5)

At this priority level, North will, during Normal Business Hours (SLA1), provide answers questions and “How do I” type queries

Requests / Changes: Remote response time SLA – 4 days

Once the fault has been completed the Service Desk will call the client to ensure all is working and then close the call. Please see escalation process below.



SLA SUMMARY

North shall use reasonable endeavours to resolve a Service affecting Incident within the Target Resolution Time from the time such Incident has been recorded at the networks Network Operation Centre.

Service Offer Price Card:

WAN connectivity & Support based on 24-month term

Pricing based on location Coventry (CV1) to local exchange

Line	Description	Product code	Qty	Circuit Set-up costs	Router Annual Cost	Circuit Annual Cost
1	Broadband DSL	North-DSL-DIA-E-W	1	£104.35	£135.66	£295.06
2	Broadband FTTC 40/10	North-FTTC40-DIA-E-W	1	£0.00	£254.83	£355.48
3	EFM	North-EFM-DIA-E-W	1	£0.00	£725.38	£2,254.57
4	PSTN	North-PSTN-E-W	1	£0.00	£0.00	£184.91
5	10Mbps over 100Mbps bearer	North-10-DIA-E-W	1	£0.00	£725.38	£2,707.06
6	20Mbps over 100Mbps bearer	North-20-DIA-E-W	1	£0.00	£725.38	3,127.77
7	100Mbps over 100Mbps bearer	North-100-DIA-E-W	1	£3,555.56	£725.38	£4,983.89
8	400Mbps over 1Gbps bearer	North-400-DIA-E-W	1	£3,555.56	£2,200.00	£5,478.57
9	500Mbps over 1Gbps bearer	North-500-DIA-E-W	1	£3,772.22	£6,032.63	£7,000.00
10	1Gbps over 1Gbps bearer	North-1000-DIA-E-W	1	£3,772.22	£4,554.05	£8,500.00
11	Netview monitoring	North-SoNm-E-W	1	£0.00	£0.00	£62.86
12	North Support 24x7x365 (per service)	North-LL-NW-S	1	£0.00	£0.00	£173.11