

Transforming  
your Business  
for the Future

January 1

2017

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# Communications Services Report

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## Executive Summary

We would like to thank CUSTOMER for the opportunity to provide this quote for Communications Services:

- Implementation of Diverse components to support resiliency.
- Greater Business Continuity through resiliency of services.

This document details the services provided to CUSTOMER in regard to providing a secure, scalable and modern communications services infrastructure. Our initial investigations and liaising with carriers and data centres has taken approximately two and a half days. The subsequent work carried out with Virgin, including project management and site visits has taken an additional two days approximately.

The first section of this document provides an initial scope of requirements as provided by CUSTOMER. The second section provides an overview of our proposal and indicates best practice and services.

The final section in this document identifies the investment involved in our proposition and will be clearly illustrated at the point of final proposal. If there are any outstanding concerns or queries that need to be raised we would encourage them as early as possible so that any risk is understood and acknowledged by all parties.

## Initial Scope of Requirements

- Additional Diverse 1Gbps Fibre Connections through multiple Telcos.
- Additional Data Centre Space.
- Additional Diverse IP Transit.
- Additional IP Telephony (IPT) VoIP Communications.
- Additional Diverse SIP.

We would very much appreciate a more formal discussion around requirements, now that we have an outline of available options.

## Proposed Solution

- Consolidation of existing 100% reliance on BT fibre from POSTCODE.
- Review of Data Centre assets to utilise proposed Diverse Telcos.
- Implementation of Diverse IPT through dual registration and Diverse SIP.

### Fibre Overview

CUSTOMER at POSTCODE is currently served only by BT fibre. We would recommend this be addressed immediately by the introduction of an alternate carrier. Carriers who have confirmed feasibility are:

- **Virgin Media Business**, with existing fibre provided to the building.
- **Cable & Wireless**, with existing fibre provided to the perimeter of the Business Park.
- **Scottish & Southern Electric (NEOS)**, with existing fibre provided to the perimeter of the Business Park.
- **Colt**, with local fibre provided to the building via either BT or Virgin Media Business.



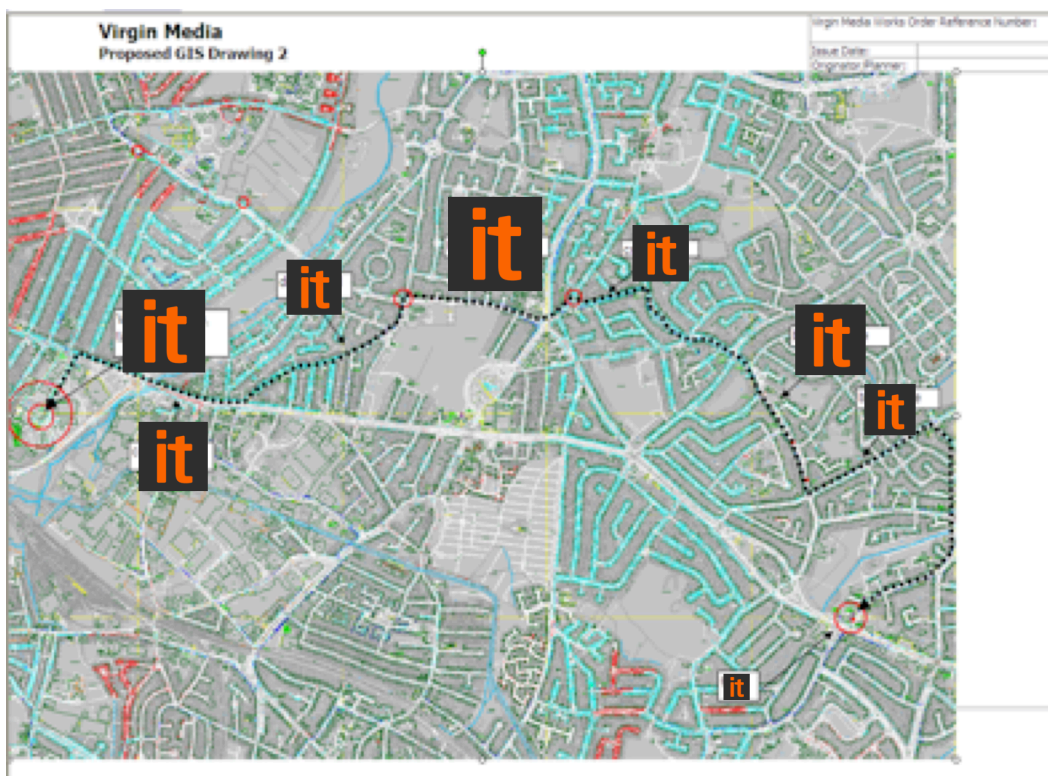
#### Virgin Media Business

VMB have fibre served to the BUILDING NAME in ducting adjacent to BT ducting on the ROAD NAME side. The ducting inside the building is shared. This fibre routes via the junction of ROAD NAME and ROAD NAME. The ducting down ROAD NAME is labelled NTL. VMB have confirmed feasibility of 1Gbps and confirmed pricing Subject to Site Survey.

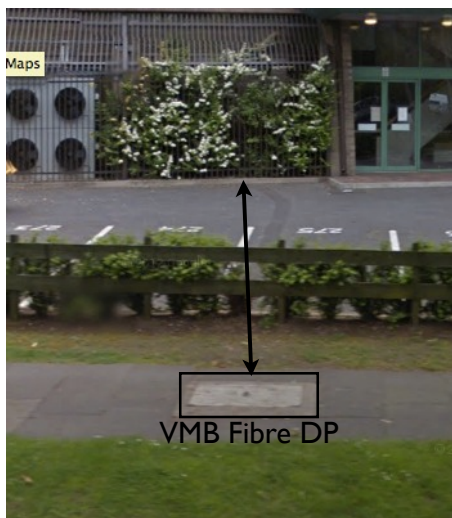
## SITE NAME

SITE NAME is the secondary Data Centre of the CUSTOMER infrastructure and is proposed as the termination for the secondary circuit. VMB fibre enters the building approximately 60 metres along ROAD NAME immediately along the pavement. There are two VMB fibre bundles entering under the floor. Both bundles terminate in RACK NUMBER into VMB owned Muxes. There are VMB fibres spliced to RACK NUMBER. It is proposed that VMB terminate the fibre to RACK NUMBER where there is an existing VMB link to RACK NUMBER. CUSTOMER CPE will be in RACK NUMBER. Please confirm with THIRD PARTY OPERATOR that this is acceptable.

The map below details the local fibre VMB have served to SITE NAME and the proposed route of the VMB Local Ethernet tail to the VMB National Ethernet Network.



The VMB Local Ethernet tail terminates at the VMB Switch Site on ROAD NAME in AREA, the route follows the opposite direction from AREA and LOCATION.



External Access at



Internal Access at



VBM Equipment in Rack

**Cable & Wireless**

C&W have fibre served at the Junction of the ROAD NAME and ROAD NAME. C&W has confirmed feasibility for 1Gbps. Pricing is indicative.

**Scottish & Southern Electric (NEOS)**

SSE (NEOS) have confirmed they can deliver up to 10Gbps. Pricing is indicative.

**BT**



Your existing BT fibres appear to be ducted adjacent to the VMB ducting on the ROAD NAME side. This fibre appears to route via the Junction of the ROAD NAME and ROAD NAME, however, it is recommended that this route be confirmed directly with Openreach.

**Network Topology**

The diagram below shows an outline of your existing topology and suggested options:

REDACTED

**Key:**

-  Existing
-  Options

**Virgin Media Business**

VMB have confirmed feasibility of 1Gbps for:

	POSTCODE	POSTCODE	POSTCODE	POSTCODE	POSTCODE
POSTCODE		REDACTED	REDACTED	REDACTED	REDACTED
POSTCODE	REDACTED		REDACTED	REDACTED	REDACTED
POSTCODE	REDACTED	REDACTED		REDACTED	REDACTED
POSTCODE	REDACTED	REDACTED	REDACTED		REDACTED
POSTCODE	REDACTED	REDACTED	REDACTED	REDACTED	

**12 Month Term:** Install charge per circuit to include each end: **£REDACTED.**

**36 Month Term:** Install charge per circuit to include each end: **£REDACTED.**

Pricing is per calendar month. Subject to Final Feasibility and Site Survey. VMB are able to provide IP Transit as a VLAN on any circuit subject to additional fee.

**Cable & Wireless**

C&W have confirmed feasibility of 1Gbps for:

	POSTCODE	POSTCODE	POSTCODE	POSTCODE	POSTCODE
POSTCODE			REDACTED	REDACTED	REDACTED
POSTCODE	REDACTED		REDACTED	REDACTED	REDACTED
POSTCODE	REDACTED			REDACTED	REDACTED
POSTCODE	REDACTED		REDACTED		REDACTED
POSTCODE	REDACTED		REDACTED	REDACTED	

Pricing is per calendar month. Install charge per circuit to include each end: **£REDACTED.** 36 month contract term. Subject to Final Feasibility and Site Survey. C&W are able to provide IP Transit as a VLAN on any circuit.

**Scottish & Southern Electricity (NEOS)**

SSE have confirmed feasibility of 1Gbps for:

	POSTCODE	POSTCODE	POSTCODE	POSTCODE	POSTCODE
POSTCODE				REDACTED	
POSTCODE				REDACTED	
POSTCODE					
POSTCODE	REDACTED	REDACTED			
POSTCODE					

Pricing is per calendar month. Install charge per circuit to include each end: **£REDACTED.** 36 month contract term. Subject to Final Feasibility and Site Survey.

**Colt**

Colt have confirmed feasibility of 1Gbps for:

POSTCODE to POSTCODE (VMB Local Tail): **£REDACTED** per month. **£REDACTED** install.

POSTCODE to POSTCODE (C&W Local Tail): **£REDACTED** per month. **£REDACTED** install.

Pricing is per calendar month. 36 month contract term. Subject to Final Feasibility and Site Survey.

**Key:**

<b>Available</b>		<b>No Price</b>		<b>Unavailable</b>	
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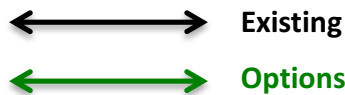
**All pricing is based upon the minimum contract term indicated. Six months in advance standard terms. All prices are exclusive of VAT. All pricing is valid for a period of 28 days only. Errors and Omissions are Excepted.**



A suggested network topology would be as below ensuring at least two alternate Telcos at each available site:

# REDACTED

**Key:**



## Layer-3 and Network Routing

To be discussed.

## IPT & SIP

Additional resiliency regarding Telephony has been identified, subsequent to service affecting issues earlier this year and late last year. We would expect to consult for a Proof of Concept with CUSTOMER and with THIRD PARTY SUPPLIER in ascertaining a resilient service option, specifically to achieve dual registration to the CUSTOMER softphone and diverse routing of SIP. Our initial estimate is between two to three days Professional Services time would need to be allocated. A similar amount of time for CUSTOMER and THIRD PARTY SUPPLIER combined would also be required. Professional services are provided at **£650** plus VAT per day.

## Investment

See individual line items as per the proposal text. Further investigation and identification of needs will be required prior to providing a full schedule of costs.

## Next Actions

We would of course like the opportunity to discuss this in much greater detail, specifically fibre required, diversity, data centre and call centre needs.