**Appendix A**

**Current Wifi and Networking Set up**

This document outlines the current setup and management of all networking ports and wifi connection.

**Network**

Environment overview

The network infrastructure provides both data and voice communications for user. The network is managed and maintained by Capita, who also provide the IT service desk function. The internal network predominantly delivers services such as Active Directory, DNS, DHCP, File and Print services, WSUS etc.

The Election System (a SQL Server application) also resides on-premises. The services are delivered by a mixture of physical and virtual servers, with the latter being hosted on a pair of Hyper-V hosts. Most applications are hosted externally, by Capita and other 3rd party providers. Mail is provided by Office 365.

A process is also underway to migrate file server data to SharePoint Online. The externally hosted systems are typically accessed directly via Internet, rather than via VPN. Users are able to access these systems from external location. Remote access into the Hart DC network environment itself to specified systems is via an Azure VPN client.

The council is upgrading its Windows 7 estate to Windows 10 during the autumn 2020. Telephony is currently provided by IP phones, which are on a separate vlan, with QoS deployed on the switches to ensure smooth traffic flow. The phones are connected to a Mitel PABX system located at Basingstoke & Deane Borough Council. The council has also issued a RFQ for a replacement telephony system. It is envisaged that this new system will go live by 31 March 2021. There are a number of external partners and associated connections arising from the above, and that connectivity is of great importance for day-to-day operations. To reduce risk there are two internet circuits, running in an active/standby configuration.

Staff and Hardware

Since March, the council staff have moved to a flexible working pattern with the majority of staff now working from home. It is envisaged that a hybrid model will exist going forward with approximately no more than 50 staff working from the building at any one time. It is expected that staff will work on a rotational basis.

The civic offices will remain the centre for public civic meetings. It is expected that a hybrid model of meetings utilizing video conferencing technology will take place. Any proposal needs to ensure that reliability and resilience are central to its design.

There are approximately 150 staff members. All staff members currently have desktops and desk phone within the offices, but as mentioned above these are being replaced Windows 10 laptops and a new cloud phone system.

Cabling

The cabling within the building is Cat 5e of varying age.

Internet connection

Hart has a 500mb dedicated internet link into Virgin Media’s core infrastructure. There is a separate backup connection which automatically fails over in the event of an outage to the primary circuit.

Network design

The network comprises a hub switch stack to which all other switch stacks are connected. The uplinks are made by means of port channels which include multiple interfaces typically spread across the physical switches in the stack.

This approach has offered resilience in case of switch failure, along with an element of load balance. The core switch is defined as the default gateway in DHCP, and onward outbound connections (firewall etc) are physically connected there. Servers, however, are not connected to the core switch but rather to a separate switch stack. The result of this design is that all network traffic between clients and servers is also going via the Core switch.

HDC-SvrRm-Core-Sw1 Description: Core switch stack. Default gateway. Hub for all Edge and Server switch stacks. Physical connections to firewalls and switches for external connectivity.

**Location: 1st Floor Comms Room**

Switch Models: 1 x WS-C3750G-48PS 1 x WS-C3750G-48TS

Total Ports: 96 Connected Ports: 26 (incl inter-switch connections)

**Location: Ground Floor Comms Cabinet**

Switch Models: 2 x WS-C3750G-48PS

Total Ports: 96 Connected Ports: 15 (incl inter-switch connections)

**Location: 1st Floor Comms Cabinet**

Switch Models: 4 x WS-C3750G-48PS

**Location: 2nd Floor Comms Cabinet**

Switch Models: 2 x WS-C3750G-48PS

Total Ports: 96 Connected Ports: 45 (incl inter-switch connections)

VLAN’s

There are 2 main VLAN’s for on premise servers and users. We also have a number of other VLANs for BDBC, public access etc.

WIFI

We currently have 9 Juniper AP’s across the building. The offices are a three storied building with two wings (left and right) on each floor. Each floor has two AP’s one situated in left wing and other in right. The only exception to this setup is our council chambers which has its own AP. The plan going forward is to refresh the ground, first and second floors. The council may in the future look to repopulate the third floor of the building. It is for this reason that authority is looking for a scalable solution.