THE PROSPECT TRUST

THE SIXTH FORM COLLEGE FARNBOROUGH – NETWORK INFRASTRUCTURE

EDGE SWITCHES V2 – TENDER DOCUMENT
STEPHEN PINK – HEAD OF NETWORK SERVICES

Version	Date	Author	Author Role	Description
1.0	27/11/2025	Stephen Pink	Head of Network Services	Document created

Part of, and the founding member of The Prospect Trust, The Sixth Form College Farnborough is one of the top performing sixth form colleges in the country for 16 to 19 year olds. With approximately 4,200 students and 350 staff, it also boasts an impressive site and facilities.

The College is in the process of undertaking a significant network infrastructure upgrade project, primarily driven by a desire to drastically improve and expand the Wi-Fi systems. As part of this, a new Optical Fibre Cabling System (OS2) has been installed. This Fibre Cabling System will connect the various building across the site, to the two main communications rooms – one in Bagnall building, and one in Whitehouse building.

The new Optical Fibre Cabling System connects new key cabinets to the main communications rooms in Bagnall and Whitehouse buildings, whilst non-key cabinets remain connected using older fibre cabling (OM3). The new Optical Fibre Cabling System was installed over Summer 2025, and each key cabinet has links to both main communications rooms.

Additionally, new core switches were installed to start taking advantage of the new Optical Fibre Cabling System – which the edge switches will need to connect back to.

In October, two building had their edge switches upgraded – these were the highest capacity buildings, and so had higher requirements than the remainder of the site.

This report and tender document will outline the design and requirements for the new edge switch configurations, which will connect back to the recently installed core switches. This will include both new key network cabinets (OS2) and existing network cabinets (OM3) to ensure improved and continued wired network access across site, whilst also preparing for Wi-Fi upgrades in the near future.

The installation will be the edge switch(es) design, configuration, and testing. Installation will be handled internally for the majority of locations; however larger cabinets will have an installation element due to time constraints.

This is not a fixed term project, as the Trust wish to start installing switches gradually over the next 6-8 months (approximately), taking advantage of any out of hours opportunities. The project should be fully completed prior to the next phase starting.

1.1. Project Summary

Each Main Communications Room is connected via OS2 fibre cabling to a number of satellite cabinets allocated as key network cabinets located across the campus. These key network cabinets support a building or an area of a building depending on the size of the building and the density of future Wi-Fi access points. There are additional network cabinets, that will be referred to as existing network cabinets, that are connected via OM3/OM4 fibre cabling, and will continue to be in use for the foreseeable future.

- **All Optical Fibre Cabling connecting the Key Network Cabinets to the Main Communications Rooms is OS2.**

- **The Optical Fibre Cabling connecting the Existing Network Cabinets to the Main Communications Rooms is a mixture of OM3 and OM4.**

1.2. Key Requirements

These requirements have been arrived at following numerous technical discussions and based on previous experience. However, the exact quantities may vary.

The key requirements that are set out in this tender document are as follows:

- **The Edge Switches in each cabinet must be stacked (or equivalent) to ensure single management IP per cabinet.**

- **The Edge Switches should support 40Gb interconnects between switches in a stack, using dedicated stacking ports.**

- **The Edge Switches in some Key Network Cabinets should support 100Gb uplink connectivity, over two links, one to each of the Core Switches.**

- **The Edge Switches in Key Network Cabinets must support a minimum of 25Gb uplink connectivity, over two links, one to each of the Core Switches**

- **The Edge Switches in Existing Network Cabinets must support a minimum of 10Gb uplink connectivity to the nearest Core Switch, however 25Gb would be preferred where possible.**

- **The system has been designed and will be installed in such a way to simplify ongoing support and control.**

- **The system shall be secure.**

These requirements align with the DfE Guidance, for meeting digital and technology standards in schools and colleges (https://www.gov.uk/guidance/meeting-digital-and-technology-standards-in-schools-and-colleges/network-switching-standards-for-schools-and-colleges)

1.3. Sustainability

As part of our commitment to environmental responsibility and sustainable construction practices, this network switch hardware installation package has been designed and specified with the following sustainability principles in mind:

- **Preference is given to products the suppliers that offer plastic-free or reduced packaging solutions.**

- **All offcuts, packaging, and redundant materials will be segregated and recycled in accordance with site waste management plans.**

- **We will work with suppliers who offer take-back schemes for switching equipment.**

1.3.1. Recycling & Waste

- o **The Contractor will be responsible for their own waste management and appropriate recycling**

- o **The Contractor is not permitted to use the College waste facilities due to lack of capacity**

1.4. Labour Histogram

The tenderer shall provide a labour histogram for the duration of the proposed works. This shall clearly show the onsite staffing days proposed, per week, for the various grades/skills of personnel proposed to be used on the project (designer, project manager, installer etc.)

This histogram shall be based on the programme information provided by the Contractor or as part of the overall tender documentation.

1.5. Working Regulations

As part of the tender response, appropriate RAMS, Public Liability Insurance must be provided.

- **All contractor personnel will report to the Estates Office each morning to sign in to the College.**

- **All contractor personnel will sign out at the end of each day, again in the Estates Office.**

- **All contractors will use the back carpark (student Car Park) entrance off Sand Hill.**

- **All contractors must complete an online induction, prior to attending site.**

1.6. Costs

As part of the tender response, costs should be clearly outlined, and broken down into at least the following areas:

- **Hardware costs**

- **Configuration and Design costs**

- **Installation costs**

- **Licensing costs**

- **Support costs**

Pricing for any of the on-going costs should be provided for both 1, 3 and 5 year options.

Due to the nature of this project, costs should be provided on a per-unit basis – so that items may be called off as and when required over the next 6 – 12 months. Pricing should be fixed for all items, so that budgetary requirements can be fixed.

Not all areas will have installation costs – some will be self-installed. Costs should be broken down to allow for a choice selection of items per order, as this will differ.

Additionally, quantities should not be taken as exact – given the nature and timeframe for this project, all quantities are subject to changes.

2. EDGE SWITCHES AND NETWORK DESIGN

2.1. Overview

The Edge Switches are part of a larger network project, and so the outcome of this project may impact on the next phase.

The Edge Switches will form the access infrastructure for the new network. There are currently 52 network cabinets – 32 are Key Network Cabinets, with the remainder being Existing Network Cabinets.

There are two Main Communications Rooms (MCR) – one in Bagnall Building, and one in Whitehouse Building. Bagnall MCR is located on the ground floor and Whitehouse MCR is located on first floor.

There are dual optical fibre cables (single-mode) run from each allocated Key Network cabinet back to the designated MCR. The MCR's are linked by multiple higher density optical fibre cables (single-mode), run directly between the MCRs which forms the backbone.

Existing Network Cabinets are currently connected to Bagnall MCR only, using fibre optic cables (multi-mode).

2.2. Connectivity Requirements

The Edge Switches will need to connect back to the Core Switches installed in the MCRs. Each MCR has the following Core Switches installed, with the connectivity detailed below;

- **1x Ruckus ICX 7850-32Q**

- **1x Ruckus ICX 7850-48F**

- **Available Connectivity (per Core)**

Connection Type	Number of Available Ports
100Gb QSFP28	12
40Gb QSFP / 100Gb QSFP28	4
1Gb SFP / 10Gb SFP+ / 25Gb SFP28	40

The Edge Switches should connect back to the Core Switches at differing speeds, depending on;

- **Cabinet type (Key or Existing)**

- **Number of Edge Switches**

- **Building Usage**

This is the minimum required – there should be allowance for future growth. However, the Existing Network Cabinets are planned to be gradually decommissioned over time, in favour of the Key Network Cabinets and so the 10/25Gb requirement will reduce.

In section 3. Network Cabinets and Communications Rooms, there is a breakdown of number of switches per cabinet.

In Appendix 1 there is a chart, that details locations of all Key Network Cabinets and the relevant MCR the fibre cables will connect back to, as well as the Existing Network Cabinets and their locations.

Appendix 2 (SCF – MCR Fibre Panel Connections Table – Full Layout.xlsx) details the Fibre Connections in each Main Communications Room, and the links to the Key Network Cabinets, as well as links to the Existing Network Cabinets.

2.3. Design Requirements

At a high-level, the key design requirements that must be met are:

- **Resilience – connectivity from Edge Switches in Key Network Cabinets to both Cores**

- **Performance – 100Gb connectivity for the higher bandwidth areas, 25Gb connectivity for the remaining Key Network Cabinets, 10Gb connectivity for the Existing Network Cabinets**

- **Connectivity – multi-gigabit ports to support future wireless access points**

- **Manageability – monitored and alerted via a single pane of glass platform, that future wireless access points will also feed into**

- **Stacking – single management and monitoring interface for all switches in a cabinet**

- **Power – PoE requirements to suit future Wi-Fi 7 access points, existing CCTV, and future VoIP system**

- **Expandability – able to "grow" the stacks in time, if needed, whether purely additional connectivity or higher performance connectivity**

- **Security – features such as 802.1X to form part of a NAC solution, for wired access now and wireless access in the future**

2.4. Optics and Cabling

All required Optics, Fibre Patch Cabling and/or DAC Cabling should be included. However, non-OEM is acceptable (FS.com preferred) with a small quantity of genuine for support and/or warranty questions in future.

Quantities should be based on the information given, with the following additions:

- **DACs are preferred for stacking**

- **Key Network Cabinets are all Single-Mode, Existing Network Cabinets are all Multi-Mode**

- **1x QSFP28 to 4x SFP28 cables or optics are not to be used**

3. NETWORK CABINETS AND COMMUNICATIONS ROOMS

3.1. Main Communications Rooms

The Main Communications Rooms (MCR's) are located in Bagnall Building and Whitehouse Building. The MCR's are established live communications rooms with existing optical fibre and copper backbone system terminated and patched into existing switches.

3.1.1. Main Communications Room – Bagnall

In the Bagnall Building MCR there are building to building fibre cable (OM3 and OM4) links to other buildings which are live. There are also copper and fibre links run internally to cabinets within the building.

There is one cabinet that will houses all OS2 patch panels supporting the new OS2 Single-Mode fibre cable system, included patch panels for the MCR to MCR optical fibre cables. The Core Switches are also housed in this cabinet.

There are two Existing Network Cabinets in this room, that form part of this project.

3.1.2. Main Communications Room – Whitehouse

In the Whitehouse Building MCR there are building to building fibre cable (OM3 and OM4) links to other buildings which are live.

There is one cabinet that will houses all OS2 patch panels supporting the new OS2 Single-Mode fibre cable system, included patch panels for the MCR to MCR optical fibre cables. The Core Switches are also housed in this cabinet.

There are two Existing Network Cabinets in this room, that form part of this project.

3.2. Existing Network Cabinets

The allocated Key Network Cabinets are in every building across the campus. There are multiple cabinets in four of the buildings.

There are existing cabinets that will not be part of the future Wi-Fi system and therefore not designated as Key Cabinets. However, these will remain connected to the existing MCR's as they are still required for network functionality. These cabinets will at a future date either be decommissioned or become part of the Key Network Cabinet system.

3.2.1 Existing Network Cabinet Locations – Bagnall Connections

- **Bagnall - SLT Office (Emma Hobbs)**

Cabinet Size	16U
Required uplink speed (minimum)	10Gb SFP+
Required quantity of 48-port PoE+++ Switches	1

- **Bagnall - Software Development Office**

Cabinet Size	16U
Required uplink speed (minimum)	10Gb SFP+
Required quantity of 48-port non-PoE Switches	1
Required quantity of 48-port PoE+++ Switches	1

- **Bagnall - IT Support - Back Office**

Cabinet Size	6U
Required uplink speed (minimum)	10Gb SFP+
Required quantity of 48-port PoE+++ Switches	1

- o **Bagnall - Business 1 Classroom**

Cabinet Size	8U
Required uplink speed (minimum)	10Gb SFP+
Required quantity of 48-port non-PoE Switches	1

- o **Bagnall - Languages Corridor - Ceiling Void**

    - ▪ **There are three cabinets in this location (single stack)**

Cabinet Size	15U
Required uplink speed (minimum)	10Gb SFP+
Required quantity of 48-port non-PoE Switches	2
Required quantity of 48-port PoE+++ Switches	1

Cabinet Size	15U
Required uplink speed (minimum)	(part of stack with other cabinet)
Required quantity of 48-port non-PoE Switches	2
Required quantity of 48-port PoE+++ Switches	1

Cabinet Size	4U
Required uplink speed (minimum)	(part of stack with other cabinet)
Required quantity of 48-port PoE+++ Switches	1

- o **Bagnall - Business Office Stair Well**

Cabinet Size	12U
Required uplink speed (minimum)	COPPER
Required quantity of 48-port non-PoE Switches	1
Required quantity of 48-port PoE+++ Switches	1

- o **Bagnall - Languages 3 Classroom**

Cabinet Size	15U
Required uplink speed (minimum)	10Gb SFP+
Required quantity of 48-port non-PoE Switches	2
Required quantity of 48-port PoE+++ Switches	1

- o **Bagnall - History Office**

Cabinet Size	16U
Required uplink speed (minimum)	COPPER
Required quantity of 48-port non-PoE Switches	2
Required quantity of 48-port PoE+++ Switches	1

- o **Music - Mixing Suite 2**

  - ▪ **There are two adjacent cabinets in this location (single stack)**

Cabinet Size	12U
Required uplink speed (minimum)	10Gb SFP+
Required quantity of 48-port non-PoE Switches	2

Cabinet Size	12U
Required uplink speed (minimum)	(part of stack with other cabinet)
Required quantity of 48-port non-PoE Switches	1
Required quantity of 48-port PoE+++ Switches	1

- o **Music - Music 1 Classroom**

Cabinet Size	12U
Required uplink speed (minimum)	10Gb SFP+
Required quantity of 48-port non-PoE Switches	1

- o **Music - Practice Room 5**

Cabinet Size	15U
Required uplink speed (minimum)	10Gb SFP+
Required quantity of 48-port non-PoE Switches	2
Required quantity of 48-port PoE+++ Switches	1

- o **Music - Practice Room 7**

Cabinet Size	9U
Required uplink speed (minimum)	10Gb SFP+
Required quantity of 48-port non-PoE Switches	2
Required quantity of 48-port PoE+++ Switches	1

- o **Ranson - Maths Office**

Cabinet Size	16U
Required uplink speed (minimum)	10Gb SFP+
Required quantity of 48-port non-PoE Switches	2
Required quantity of 48-port PoE+++ Switches	1

- o **Science - Chemistry - Stair Well (Bottom)**

Cabinet Size	15U
Required uplink speed (minimum)	10Gb SFP+
Required quantity of 48-port non-PoE Switches	2
Required quantity of 48-port PoE+++ Switches	1

- o **Science - Chemistry - Prep Room**

Cabinet Size	14U
Required uplink speed (minimum)	10Gb SFP+
Required quantity of 48-port non-PoE Switches	2
Required quantity of 48-port PoE+++ Switches	1

- o **Simon Jarvis Lecture Theatre - AV Cupboard**

  - ▪ **N/A – this will be removed**

o **Sports - PE Office**

Cabinet Size	13U
Required uplink speed (minimum)	10Gb SFP+
Required quantity of 48-port non-PoE Switches	1
Required quantity of 48-port PoE+++ Switches	1

o **Sports - Hallway Cupboard**

Cabinet Size	12U
Required uplink speed (minimum)	10Gb SFP+
Required quantity of 48-port non-PoE Switches	1
Required quantity of 48-port PoE+++ Switches	1

Please note that some of this may be decommissioned prior to the end of this project, and so not all switches may be required.

3.3. Key Network Cabinets

The Key Network Cabinets are located in storerooms, cupboards, offices, breakout areas and communications rooms across the campus.

3.3.1. Key Network Cabinet Locations – Bagnall Connections

o **Bagnall – Server Area (Main Communications Room)**

- **There are two adjacent cabinets in this location (identical) (separate stacks)**

Cabinet Size	44U x2
Required uplink speed (minimum)	25Gb SFP28
Required quantity of 48-port non-PoE Switches	6
Required quantity of 48-port PoE+++ Switches	2

o **Bagnall – IT Support Office**

Cabinet Size	16U
Required uplink speed (minimum)	25Gb SFP28
Required quantity of 48-port non-PoE Switches	2
Required quantity of 48-port PoE+++ Switches	1

o **Bagnall – Economics Office**

Cabinet Size	12U
Required uplink speed (minimum)	25Gb SFP28
Required quantity of 48-port PoE+++ Switches	1

o **Bagnall – IT Store Cupboard (Opposite Business 10)**

Cabinet Size	16U
Required uplink speed (minimum)	25Gb SFP28
Required quantity of 48-port PoE+++ Switches	1

o **Bagnall – Timeout Café**

Cabinet Size	7U
Required uplink speed (minimum)	25Gb SFP28
Required quantity of 48-port PoE+++ Switches	1

o **Bagnall – Reprographics**

Cabinet Size	44U
Required uplink speed (minimum)	25Gb SFP28
Required quantity of 48-port non-PoE Switches	5
Required quantity of 48-port PoE+++ Switches	1

o **Bagnall – History Office**

Cabinet Size	16U
Required uplink speed (minimum)	25Gb SFP28
Required quantity of 48-port non-PoE Switches	2
Required quantity of 48-port PoE+++ Switches	1

o **Bagnall – LRC Upper Bagnall**

Cabinet Size	16U
Required uplink speed (minimum)	25Gb SFP28
Required quantity of 48-port PoE+++ Switches	1

o **Bagnall – Philosophy Office**

Cabinet Size	7U
Required uplink speed (minimum)	25Gb SFP28
Required quantity of 48-port PoE+++ Switches	1

o **Bagnall – Geography Store Cupboard**

Cabinet Size	27U
Required uplink speed (minimum)	25Gb SFP28
Required quantity of 48-port non-PoE Switches	3
Required quantity of 48-port PoE+++ Switches	2

o **Bagnall – Business Office**

Cabinet Size	18U
Required uplink speed (minimum)	25Gb SFP28
Required quantity of 48-port non-PoE Switches	1
Required quantity of 48-port PoE+++ Switches	1

o **Bagnall – Student Services**

▪ **There are two adjacent cabinets in this location (single stack)**

Cabinet Size	16U
Required uplink speed (minimum)	25Gb SFP28
Required quantity of 48-port non-PoE Switches	2
Required quantity of 48-port PoE+++ Switches	1

Cabinet Size	16U
Required uplink speed (minimum)	(part of stack with other cabinet)
Required quantity of 48-port non-PoE Switches	1
Required quantity of 48-port PoE+++ Switches	1

- o **Ranson – SLT Office**

Cabinet Size	47U
Required uplink speed (minimum)	25Gb SFP28
Required quantity of 48-port non-PoE Switches	4
Required quantity of 48-port PoE+++ Switches	1

- o **Simon Jarvis Lecture Theatre – AV Cupboard**

Cabinet Size	TBC
Required uplink speed (minimum)	25Gb SFP28
Required quantity of 24-port PoE+++ Switches	1

- o **Courtyard – Outside Store Cupboard**

Cabinet Size	TBC
Required uplink speed (minimum)	25Gb SFP28
Required quantity of 24-port PoE+++ Switches	1

- o **Science – Chemistry – Prep Room Cupboard**

Cabinet Size	16U
Required uplink speed (minimum)	25Gb SFP28
Required quantity of 48-port non-PoE Switches	1
Required quantity of 48-port PoE+++ Switches	1

o **Science – Chemistry – Stair Well**

Cabinet Size	TBC
Required uplink speed (minimum)	25Gb SFP28
Required quantity of 48-port non-PoE Switches	3
Required quantity of 48-port PoE+++ Switches	1

o **Annexe – Store Cupboard**

Cabinet Size	16U
Required uplink speed (minimum)	25Gb SFP28
Required quantity of 48-port non-PoE Switches	1
Required quantity of 48-port PoE+++ Switches	1

3.3.2. Key Network Cabinet Locations – Whitehouse Connections

o **Whitehouse – Server Area (Main Communications Room)**

▪ **There are two adjacent cabinets in this location (separate stacks)**

Cabinet Size	47U
Required uplink speed (minimum)	25Gb SFP28
Required quantity of 48-port non-PoE Switches	7
Required quantity of 48-port PoE+++ Switches	1

Cabinet Size	47U
Required uplink speed (minimum)	25Gb SFP28
Required quantity of 48-port non-PoE Switches	5
Required quantity of 48-port PoE+++ Switches	1

- o **Beacon – Store Cupboard (NOTE: This has been completed in the October half term)**

    - ▪ **There are two adjacent cabinets in this location (separate stacks)**

Cabinet Size	42U
Required uplink speed (minimum)	100Gb SFP28
Required quantity of 48-port non-PoE Switches	5
Required quantity of 48-port PoE+++ Switches	1

Cabinet Size	42U
Required uplink speed (minimum)	100Gb SFP28
Required quantity of 48-port non-PoE Switches	8
Required quantity of 48-port PoE+++ Switches	1

- o **John Guy – Network Cupboard (NOTE: This has been completed in the October half term)**

    - ▪ **There are two adjacent cabinets in this location (separate stacks)**

Cabinet Size	42U
Required uplink speed (minimum)	100Gb SFP28
Required quantity of 48-port non-PoE Switches	6
Required quantity of 48-port PoE+++ Switches	2

Cabinet Size	42U
Required uplink speed (minimum)	100Gb SFP28
Required quantity of 48-port non-PoE Switches	4
Required quantity of 48-port PoE+++ Switches	2

- o **Greenhouse – Outside Store Cupboard**

Cabinet Size	7U
Required uplink speed (minimum)	25Gb SFP28
Required quantity of 24-port PoE+++ Switches	1

- o **Shades – Store Cupboard**

Cabinet Size	TBC
Required uplink speed (minimum)	25Gb SFP28
Required quantity of 48-port non-PoE Switches	1
Required quantity of 48-port PoE+++ Switches	1

- o **Sports – PE Office**

Cabinet Size	18U
Required uplink speed (minimum)	25Gb SFP28
Required quantity of 48-port non-PoE Switches	1
Required quantity of 48-port PoE+++ Switches	1

- o **Prospect Theatre – Performing Arts Office**

Cabinet Size	12U
Required uplink speed (minimum)	25Gb SFP28
Required quantity of 48-port non-PoE Switches	1
Required quantity of 48-port PoE+++ Switches	1

- o **Music – Music 1 Store Cupboard**

Cabinet Size	12U
Required uplink speed (minimum)	25Gb SFP28
Required quantity of 48-port non-PoE Switches	1
Required quantity of 48-port PoE+++ Switches	1

- o **Music – Mixing Suite 2**

Cabinet Size	24U
Required uplink speed (minimum)	25Gb SFP28
Required quantity of 48-port non-PoE Switches	1
Required quantity of 48-port PoE+++ Switches	1

- o **Music – Studio 6**

Cabinet Size	TBC
Required uplink speed (minimum)	25Gb SFP28
Required quantity of 24-port PoE+++ Switches	1

3.4. Edge Switch Requirement Summary

Based on the network cabinet information provided, the below is a summary of the Edge Switches required currently. This is subject to changes, so please use quantities as a guideline only.

Edge Switch Type	Required Uplink Speed (minimum)	Quantity
48-port non-PoE Switches	10Gb SFP+	27
48-port PoE+++ Switches	10Gb SFP+	17
24-port PoE+++ Switches	25Gb SFP28	4
48-port non-PoE Switches	25Gb SFP28	48
48-port PoE+++ Switches	25Gb SFP28	26

4. DOCUMENTATION

4.1. Pre-Installation Requirements

The Contractor shall attend all meetings as required with the Trust IT Team when required. The Contractor will finalise the final detailed design, report on progress and agree the final installation requirements.

This will include but not be limited to finalising requirements for design, configuration and installation in the cabinets, installation drawings and documentation, and all other items necessary to ensure that the system installed is fully coordinated and designed.

Detailed product datasheet stating where applicable dimensions, performance, standards compliance, installation method and statement of compliance to specification for all products to be used will be submitted for approval.

The Contractor shall ensure that no equipment or components are installed without the prior approval of the Trust IT Team. Equipment installed that has not been formally approved and signed off is done so at the risk of the Contractor and may be instructed to be replaced by the Contractor at no additional cost to the College.

The Contractor must take high-resolution photographs prior to starting any work – the quality must be such that labelling can be read, if needed for future reference.

4.2. Post-Installation Requirements

The contractor shall be responsible for coordinating with the College in respect of any other works from other contractors on site that may affect the installation works.

The contractor shall be responsible for coordinating with the College in respect of overall attendance on the works. This shall relate to ensuring that the installed works are not left exposed to environmental effects or are damaged by other on-site trades.

The Contractor must take high-resolution photographs after installation – the quality must be such that labelling can be read, if needed for future reference.

4.3. Installation Documents

The Contractor shall submit the following detailed documentation to the Trust IT Team representative for comment at least two weeks prior to completion of the works or the date required by the College:

- **Network Topology Diagram**

- **Management Platform access and configuration**

- **Layout drawings for each cabinet installation and connections**

- **Labelling scheme**

- **Full written description of the works and manufacturer datasheets**

- **System Warranty**

- **Test results**

The list above is a set of minimum requirements; the Contractor shall include any additional items required by the College. The quantities and format for the as installed documentation shall be in accordance with the requirements of the College.

4.4. Testing and Commissioning

Tests of the installed and configured Edge Switches shall be carried out to ensure that they have been installed and configured correctly and to verify performance in line with the requirements laid out earlier in the document. This will include testing failover scenarios, to prove the redundancy.

The Tenderer shall detail in its Response its proposed testing methodology, performance measuring accuracy, and expected failover tolerances.

5. TENDER RESPONSES

5.1. Timeline

The first order for delivery and installation will be planned for the February Half Term (Monday 16th to Friday 20th February), all handled by the Contractor.

Dates for the remainder of hardware to be delivered, as well as installation details, will be discussed further down the line.

5.2. Addressees

Please address responses to the following;

Stephen Pink
Head of Network Services
stephen.pink@theprospecttrust.org.uk
07548 777016

Jake Deallie
IT Network Development & Project Lead
jake.deallie@theprospecttrust.org.uk
07356 124996

APPENDICES

Appendix 1 – Cabinet Connectivity and Labels

Key Network Cabinets (OS2 Fibre)

Cabinet Name	Location	Fibre Termination	Fibre Cores
SCF-CAB-C019	Bagnall - IT Support Office	Bagnall	24-core
SCF-CAB-C034B	Bagnall - Economics Office	Bagnall	24-core
SCF-CAB-071	Bagnall - IT Store Cupboard (Opposite Business 10)	Bagnall	24-core
SCF-CAB-C015	Bagnall - Reprographics	Bagnall	24-core
SCF-CAB-D008	Bagnall - Timeout Café	Bagnall	24-core
SCF-CAB-C120	Bagnall - Philosophy Office	Bagnall	24-core
SCF-CAB-C118	Bagnall - History Office	Bagnall	24-core
SCF-CAB-C101	Bagnall - Business Office	Bagnall	24-core
SCF-CAB-C103	Bagnall - LRC Upper Bagnall	Bagnall	24-core
SCF-CAB-D107	Bagnall - Student Services	Bagnall	24-core
SCF-CAB-C208	Bagnall - Geography Store Cupboard	Bagnall	24-core
SCF-CAB-B006A	Annexe - Store Cupboard	Bagnall	24-core
SCF-CAB-M000	Courtyard - Outside Store Cupboard	Bagnall	24-core
SCF-CAB-E019A	Simon Jarvis Lecture Theatre - AV Cupboard	Bagnall	24-core
SCF-CAB-E004	Ranson - SLT Office	Bagnall	24-core
SCF-CAB-B105	Science - Chemistry - Prep Room Cupboard	Bagnall	24-core
SCF-CAB-B100	Science - Chemistry - Stair Well	Bagnall	24-core
SCF-CAB-J015-B	Beacon - Store Cupboard	Whitehouse	24-core

SCF-CAB-J015-A	Beacon - Store Cupboard	Whitehouse	2ND CABINET
SCF-CAB-F017-B	John Guy - Network Cupboard	Whitehouse	24-core
SCF-CAB-F017-A	John Guy - Network Cupboard	Whitehouse	2ND CABINET
SCF-CAB-L000	Greenhouse - Outside Store Cupboard	Whitehouse	24-core
SCF-CAB-G008	Shades – Store Cupboard	Whitehouse	24-core
SCF-CAB-A030	Sports - PE Office	Whitehouse	24-core
SCF-CAB-A038B	Music - Mixing Suite 2	Whitehouse	24-core
SCF-CAB-A107	Music - Music 1 Store Cupboard	Whitehouse	24-core
SCF-CAB-A011	Prospect Theatre - Performing Arts Office	Whitehouse	24-core
SCF-CAB-N000	Music - Studio 6	Whitehouse	24-core
SCF-BSA-CAB-A	Bagnall – Bagnall Server Area	Whitehouse	96-core
SCF-WSA-CAB-A	Whitehouse – Whitehouse Server Area	Bagnall	96-core

Existing Network Cabinets (OM3/OM4 Fibre)

Cabinet Name	Location	Fibre Termination
SCF-CAB-C002A	Bagnall - SLT Office (Emma Hobbs)	Bagnall
SCF-CAB-C007A	Bagnall - Software Development Office	Bagnall
SCF-CAB-C019-B	Bagnall - IT Support - Back Office	Bagnall
SCF-CAB-C028	Bagnall - Business 1 Classroom	Bagnall
SCF-CAB-C035-A	Bagnall - Languages Corridor - Ceiling Void	Bagnall

SCF-CAB-C035-B	Bagnall - Languages Corridor - Ceiling Void	N/A
SCF-CAB-C035-C	Bagnall - Languages Corridor - Ceiling Void	N/A
SCF-CAB-C100	Bagnall - Business Office Stair Well	Bagnall
SCF-CAB-C068	Bagnall - Languages 3 Classroom	Bagnall
SCF-CAB-C118-B	Bagnall - History Office	N/A
SCF-CAB-A038B-B	Music - Mixing Suite 2	Bagnall
SCF-CAB-A038B-C	Music - Mixing Suite 2	Bagnall
SCF-CAB-A109	Music - Music 1 Classroom	Bagnall
SCF-CAB-A113	Music - Practice Room 5	Bagnall
SCF-CAB-A125	Music - Practice Room 7	Bagnall
SCF-CAB-E111	Ranson - Maths Office	Bagnall
SCF-CAB-B100-B	Science - Chemistry - Stair Well (Bottom)	Bagnall
SCF-CAB-B105-B	Science - Chemistry - Prep Room	Bagnall
SCF-CAB-E019A-B	Simon Jarvis Lecture Theatre - AV Cupboard	Bagnall
SCF-CAB-A030-B	Sports - PE Office	Bagnall

SCF-CAB-K001	Sports - Hallway Cupboard	Bagnall

Appendix 2 – MCR Fibre Panel Connections

File Name	File Description
SCF - MCR Fibre Panel Connections Table - Full Layout.xlsx	Table showing the layout and distribution of Fibre Panels in both Main Communications Rooms, with the links to Key Network Cabinets and Existing Network Cabinets.

Optical Fibre Panel Layout, Source and Destination - BAGNALL MCR (SCF-CAB-BSA-A)

Panel 1 (Row 1)

Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	
1-4 OS2 LINK CAB-C015				5-8 OS2 LINK CAB-C019				9-12 OS2 LINK CAB-C034B				13-16 OS2 LINK CAB-C071				17-20 OS2 LINK CAB-C101				21-24 OS2 LINK CAB-C103				1 x 96 core core to core fibre
1-4 OS2 LINK CAB-C118				5-8 OS2 LINK CAB-C120				9-12 OS2 LINK CAB-C208				13-16 OS2 LINK CAB-D008				17-20 OS2 LINK CAB-D107				SPARE				

Panel 2 (Row 2)

Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	
1-4 OS2 LINK CAB-B006A				5-8 OS2 LINK CAB-B100				9-12 OS2 LINK CAB-B105				13-16 OS2 LINK CAB-E004				17-20 OS2 LINK CAB-E019A				21-24 OS2 LINK CAB-M000				1 x 96 core core to core fibre
1-4 OS2 LINK CAB-F017				5-8 OS2 LINK CAB-G008				9-12 OS2 LINK CAB-J015				13-16 OS2 LINK CAB-L000				17-20 OS2 LINK CAB-A011				21-24 OS2 LINK CAB-A030				

Panel 3 (Row 4)

Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	
1-4 OS2 LINK CAB-A038B				5-8 OS2 LINK CAB-A107				9-12 OS2 LINK CAB-N000				SPARE				SPARE				SPARE				1 x 96 core core to core fibre
SPARE				SPARE				SPARE				SPARE				SPARE				SPARE				

Panel 4 (Row 5)

Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	
1-24 OS2 LINK CORE SWITCHES																								1 x 96 core core to core fibre
SPARE				SPARE				SPARE				SPARE				SPARE				SPARE				

Rows 7-9

Core
Core
Core

Panel 9 (Row 11)

Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24
1-12 OS2 to CAB-C015 - Fibre A												13-24 OS2 to CAB-C015 - Fibre B											

Panel 10 (Row 12)

Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24
1-12 OS2 to CAB-C019 - Fibre A												13-24 OS2 to CAB-C019 - Fibre B											

Panel 11 (Row 13)

Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24
1-12 OS2 to CAB-C034B - Fibre A												13-24 OS2 to CAB-C034B - Fibre B											

Panel 12 (Row 15)

Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24
1-12 OS2 to CAB-C071 - Fibre A												13-24 OS2 to CAB-C071 - Fibre B											

Panel 13 (Row 16)

Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24
1-12 OS2 to CAB-C101 - Fibre A												13-24 OS2 to CAB-C101 - Fibre B											

Panel 14 (Row 17)

Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24
1-12 OS2 to CAB-C103 - Fibre A												13-24 OS2 to CAB-C103 - Fibre B											

Panel 15 (Row 19)

Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24
1-12 OS2 to CAB-C118 - Fibre A												13-24 OS2 to CAB-C118 - Fibre B											

Panel 16 (Row 20)

Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24
1-12 OS2 to CAB-C120 - Fibre A												13-24 OS2 to CAB-C120 - Fibre B											

Panel 17 (Row 21)

Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24
1-12 OS2 to CAB-C208 - Fibre A												13-24 OS2 to CAB-C208 - Fibre B											

Row	Panel	Port assignments
22		
23	Panel 18	Ports 1–24
		1-12 OS2 to CAB-D008 - Fibre A (Ports 1–12) · 13-24 OS2 to CAB-D008 - Fibre B (Ports 13–24)
24	Panel 19	Ports 1–24
		1-12 OS2 to CAB-D107 - Fibre A (Ports 1–12) · 13-24 OS2 to CAB-D107 - Fibre B (Ports 13–24)
25	Panel 20	Ports 1–24
		1-12 OS2 to CAB-B006A - Fibre A (Ports 1–12) · 13-24 OS2 to CAB-B006A - Fibre B (Ports 13–24)
26		
27	Panel 21	Ports 1–24
		1-12 OS2 to CAB-B100 - Fibre A (Ports 1–12) · 13-24 OS2 to CAB-B100 - Fibre B (Ports 13–24)
28	Panel 22	Ports 1–24
		1-12 OS2 to CAB-B105 - Fibre A (Ports 1–12) · 13-24 OS2 to CAB-B105 - Fibre B (Ports 13–24)
29	Panel 23	Ports 1–24
		1-12 OS2 to CAB-E004 - Fibre A (Ports 1–12) · 13-24 OS2 to CAB-E004 - Fibre B (Ports 13–24)
30		
31	Panel 24	Ports 1–24
		1-12 OS2 to CAB-E019A - Fibre A (Ports 1–12) · 13-24 OS2 to CAB-E019A - Fibre B (Ports 13–24)
32	Panel 25	Ports 1–24
		1-12 OS2 to CAB-M000 - Fibre A (Ports 1–12) · 13-24 OS2 to CAB-M000 - Fibre B (Ports 13–24)
33		**BRUSH MANAGEMENT BAR**
34	Panel 1	Ports 1–24
		1-24 OM4 to CAB-WSA-A (Ports 1–24)
35	Panel 2	Ports 1–24
		1-8 OM4 to CAB-D008 (Ports 1–8) · 9-12 OM4 to CAB-C028 (Ports 9–12) · 13-24 to CAB-E004 > CAB-E111, CAB-E019A-B, CAB-M000 (Ports 13–24)
36		**BRUSH MANAGEMENT BAR**
37	Panel 3	Ports 1–24
		1-4 OM3 to CAB-C007A (Ports 1–4) · 5-8 OM3 to CAB-C015 (Ports 5–8) · 9-12 OM3 to CAB-C019 (Ports 9–12) · 13-14 OM3 to CAB-C019-B (Ports 13–14) · 15-16 OM3 to CAB-C101 (Ports 15–16) · 17-20 OM3 to CAB-C035 (Ports 17–20) · 21-24 OM3 to CAB-C068 (Ports 21–24)
38	Panel 4	Ports 1–24
		1-4 OM3 to CAB-C208 (Ports 1–4) · 5-8 OM3 to CAB-D107 (Ports 5–8) · 13-16 OM3 to CAB-B105-B (Ports 13–16) · 17-20 OM3 to CAB-B100 (Ports 17–20) · 21-24 OM3 to CAB-B100-B (Ports 21–24)
39		**BRUSH MANAGEMENT BAR**
40	Panel 5	Ports 1–24
		1-4 OM3 to CAB-A038B-B (Ports 1–4) · 5-8 OM3 to CAB-A038B-B > CAB-A125 (Ports 5–8) · 9-12 OM3 to CAB-A038B-B > CAB-N000 (Ports 9–12) · 13-16 OM3 to CAB-A113 (Ports 13–16) · 17-20 OM3 to CAB-A113 > CAB-A006 (Ports 17–20) · 21-24 OM3 to CAB-B006A (Ports 21–24)
41	Panel 6	Ports 1–24
		1-4 OM3 to CAB-F017 (Ports 1–4) · 5-8 OM3 to CAB-J015 (Ports 5–8) · 9-12 OM3 to CAB-J015 > CAB-G008 (Ports 9–12) · 13-16 OM3 to CAB-L000 (Ports 13–16) · 17-20 OM3 to CAB-K001 (Ports 17–20) · 21-24 OM3 to CAB-A030-B (Ports 21–24)
42		**BRUSH MANAGEMENT BAR**