Navigating Broadband Options

A Buyer's Guide for School Business Managers

Understanding the different types of broadband and their associated speeds is crucial for ensuring your school stays connected and runs efficiently. A reliable, high-speed broadband connection is the backbone of seamless operations for every successful school in the country, so it's important you make the right choice.

In this guide, as well as looking at what makes a good broadband provider, we'll explore the many broadband options available, which connectivity types meet the DfE standards, we'll look at upload and download speeds and what you need to consider, as well as general speeds recommended for different school sizes. First, let's take a look at the DfE Broadband Standards.

DfE Broadband Standards

In March 2022 the DfE set minimum broadband standards as guidelines for schools when choosing the right digital infrastructure and technology. The standards state that all schools should use a full fibre connection for their broadband service or upgrade to fibre at the earliest opportunity.

Primary school broadband connections should meet a minimum 100Mbps (Megabits per second) download and 30Mbps upload, with the capacity to deliver 1Gbps (1000Mbps) as demand on your broadband service increases. All secondary schools are required to have a 1Gbps (Gigabit per second) capacity, however this should be capable of providing the same symmetrical upload and download speed). Depending on the size of your secondary school and its broadband usage levels, you may well need more than 1Gbps. Connections are available up to 10Gbps.

An additional resilient backup connection of a different type to your main internet connection should also be installed. The standards also state a firewall is required as part of the school's internet and network system.

Understanding Upload and Download Dynamics

Download Speed
The download speed is the rate at which data is transferred from the internet to your school's router. This is not the speed at which a device on your network can access the internet, as there may be many factors that affect data transfer speeds on a school network e.g. core and hub switches, wireless technology, device technology to name a few. This is important as many factors may affect the speed of downloading files, accessing websites, and streaming content.

Upload Speed
The upload speed is the rate at which data is sent from your school's network to the router. Actual speed principles as per download, also applies. Upload speed is crucial for activities like video conferencing, uploading content to the cloud, and running online collaborative platforms.

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Types of Broadband: Unravelling the Options

FTTC (Fibre to the Cabinet) – Superfast Fibre: This uses fibre optic cables that go from the local exchange as far as the green street cabinet, then through copper lines to your school. This delivers up to 80Mbps download and 20Mbps upload. This connectivity type does not meet the DfE standards that were set in March 2022. You should look to upgrade an FTTC connection as soon as other options are available in your area. Please check with us for availability.

FTTP (Fibre to the Premises) – Ultrafast Broadband: This is a full fibre connection with fibre connecting from the local exchange directly to your premises. It provides broadband download speeds starting at 100Mbps and is quick and easy to upgrade to faster speeds up to 1000Mbps if required. The versatility of FTTP means it is ideal for primary schools of varying sizes. Significantly better value than leased lines of the same speed, FTTP fully meets the DfE Broadband Standards for primary schools. Please be aware that FTTP does not provide symmetrical upload and download speeds, and therefore does not meet the DfE Broadband Standards for secondary schools.

Full Fibre: Recently over 100 new alternative network providers, known as "AltNets" have been building full fibre networks. Their full fibre connections provide lightning-fast speeds from 100Mbps all the way up to 10Gbps at more favourable prices than traditional leased line connections. While services vary from AltNet to AltNet with regards to guaranteed download and upload speeds, along with contention, this is certainly a more economical way of achieving high-speed connectivity. They are a future-proof connection for schools, providing flexibility to increase speeds quickly and easily as your broadband & cloud usage increases. Suitable as a main broadband connection or failover line depending on the size of your school.

Dedicated Leased Lines Leased lines also provide speeds from 100Mbps to 10Gbps (Gigabits per second), where all speeds are guaranteed with a 99.95% service level agreement. Whilst leased lines are the costliest of all connections, they come with symmetrical speeds are uncontended and provide superior reliability. They are suitable for medium to large schools with high data traffic e.g. cloud services, and reliability demands. Available everywhere, though are subject to site a survey. Please ask for more details.

Things to Consider When Choosing a Provider

Assess your School's Current Broadband Usage Analyse your school's current internet usage patterns to determine the required speed. Please contact us if you need help with this.

Futureproofing your Broadband Connection Anticipate any growth requirements such as the size of your school, whether you plan to increase the use of the internet in lessons, if you plan to increase the number of devices on your network, or whether your back-office functions are likely to make more use of cloud services. Ensure your chosen connection type can accommodate future needs.

Budget Considerations Balance performance requirements and meeting DfE recommended standards with budget constraints. Generally, FTTP offers the best value broadband up to 1000Mbps so good for primary schools; for budget conscious secondary schools a full fibre connection would be advisable if full fibre is available. The speeds and guarantees will determine the cost.

Listed Framework Providers, Reliability and Support: Prioritise education specialist providers who can provide robust security, firewalls and safeguarding services. Ensure your provider can support your DfE and KCSiE compliance, and check to see if they are on one of the major DfE approved frameworks such as CCS or YPO. Frameworks provide you with a cost effective way of procuring services for your school, knowing they have already been through a rigorous vetting process.

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