SWGfL FttC and ADSL Services

Core Service

SWGfL provides a full managed service. In summary this includes:

- Connectivity
- Essential Safety
- Essential Security
- Change/Service Management and Development
- Infrastructure Design, Management and Standards
- Service Desk, Support and Technical/ Engineering Services
- Electronic Service Interface (ESI)
- Service Usage Monitoring and Reporting

SWGfL can provide FttC services as well as ADSL and Bonded ADSL services within the Schools Internet Services. The table below summarises the FttC and ADSL services available to you:

	Service	Description	Performance
1	ADSL Max **'up to 8Mb'**	An ADSL service with a lower 'contention ratio', suitable for small schools or settings	• up to 8Mb down • up to 1Mb up
2	ADSL**2+** **'up to 20Mb'**	A higher speed ADSL service, improving on ADSL Max	• up to 20Mb down • up to 1.3Mb up
	ADSL**2+** **Annex M**	Based on ADSL2+, but with higher upstream bandwidth	• up to 20Mb down • up to 3.3Mb up
3	Bonded ADSL	A range of bonded ADSL solutions delivering higher performance than single line	• up to 50Mb down • up to 3.3Mb up
4	FttC **'up to 40Mb'**	Using Superfast Broadband technology	• up to 40Mb down • up to 10Mb up
5	Bonded FttC	A bonded FttC solution delivering higher performance than single line	• up to 100Mb down • up to 25Mb up
6	Connectivity Backup Service	A backup solution, should any issues arise with the main connection	N/A

For Bonded ADSL or Bonded FttC details, please contact us.

This document:	For Connectivity Backup Services:	FttC and ADSL Request Form:
FttC and ADSL Services	Click here	Click here

Contact Details:

SWGfL Schools Internet Services Team
sis@swgfl.org.uk
T: 0845 601 3203

SWGfL Service Desk
support@swgfl.org.uk
T: 0845 307 7870

South West Grid for Learning
Schools Internet Services

1. SWGfL Services

1.1 Why use SWGfL FttC or ADSL?

The SWGfL FttC and ADSL services have been designed to offer you the most cost-effective connectivity in your area, whilst maintaining performance and the benefits of SWGfL's Core Service.

It's important to distinguish between services provided by SWGfL and services available for individual purchase from commercial providers. SWGfL provides a bespoke, managed network, but also a full service wrap delivering safe, secure, high-performance, education-specific services across the entire south west region, far above and beyond just a connection to the Internet.

More often than not school operations require more than just a connection to the internet. This isn't just about the level of bandwidth available, but how the other elements of the service combine to support this way of working collaboratively.

> ### Included in your service
>
> Your Schools Internet Service **really is** a service, including:
> - The circuit, including bandwidth and internet connection
> - SWGfL core network, including IP and other network services
> - Our unique approach to blocking illegal content and reporting to the police, plus entry-level filtering
> - Security services, including managed firewalls and intrusion prevention
> - Our dedicated Service Desk and 24x7 network monitoring and ESI
> - Change management, meeting changing needs usually without any additional charges

You'll be 'on-net' with our service, getting all the benefits of the SWGfL Core Service (see appendix for details), including our unique approach to online safety and our security services, including centralised, managed firewalls.

It's worth remembering too that schools considering procuring from elsewhere don't just lose these benefits, but also become responsible for it themselves, including such elements as an appropriate level of safety and security. SWGfL has a long and successful track record in ensuring these things are all dealt with, meaning schools can focus on their main priorities.

1.1.1 Safety Services

SWGfL FttC and ADSL services come with RM SafetyNet filtering to your users stay safe. It's peace-of-mind, as standard, and utilises core filter lists managed by experts.
- Advanced multi-layered model filtering provides optimum protection
- Active-Adapt content filter that instantly scans the content of every page, identifying the context before allowing access
- Automatically updated with the latest data so you can rely on the most up to date protection
- Developed by experts in education and used by thousands of schools, colleges, libraries and LAs

You can also upgrade to SafetyNet Plus (Optional Service), adding quick customisation and control of your filtering through a web-based admin interface. Local changes are made within only 90 seconds.

> ### Checklist - with the SWGfL Core Service you get...
>
> | | |
> |---|---|
> | Unique online safety service and links to police | ☑ |
> | Best of breed security | ☑ |
> | Support via expert, UK-based Service Desk | ☑ |
> | 24x7 network monitoring | ☑ |
> | Network services (setting up of IP, DNS, etc.) | ☑ |
> | Change management | ☑ |
> | Personalised school portal | ☑ |
>
> **...all included - no additional charges.**

1.1.2 Customer Premises Equipment (CPE)

The SWGfL infrastructure is built around Cisco network products, including the equipment deployed for most customers, to help ensure security, integrity, availability and performance.

> ### Question?
> **Call us on 0845 601 3203 or drop us a line at sis@swgfl.org.uk**

South West Grid for Learning
Schools Internet Services

1.2   Service Details

We work with RM IHG – a part of RM Education that delivers internet services to a number of large network customers - and a wide range of leading telecoms providers to offer the widest range of options for broadband to suit differing requirements.

1.2.1   What is FttC?

FttC stands for 'fibre to the cabinet', referring to the BT green cabinets you see in the streets. BT and other operators are rolling out a range of technologies to deliver higher speeds, including both fibre to the cabinet (FttC) and fibre to the premise (FttP).
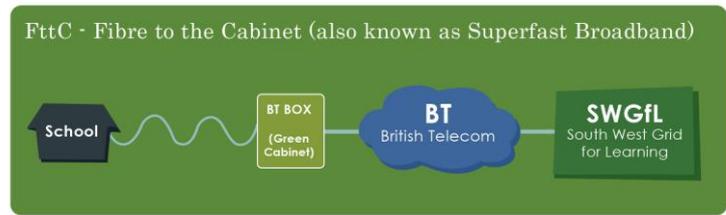
The bulk of BT's deployment to date is based on FttC, and BT is investing c£2.5 billion to reach more of the country with its broadband programme over the coming years. BT's FttC deployment is part of its NGA scheme, which you may also hear referred to as 'Infinity' or 'Superfast Broadband'.

1.2.1   What's new?

FttC works in a similar way to the ADSL products (i.e. delivered over the phone line) we've had for some time, except that it's a lot faster due to the use of fibre in some parts of the network.

How? The BT green cabinets are upgraded to house larger, more powerful equipment. The connection to your premises (from the green cabinet) still uses the telephone line, but the connection from the cabinet to the exchange (using this enhanced kit) uses a fibre optic cable, meaning a faster connection.
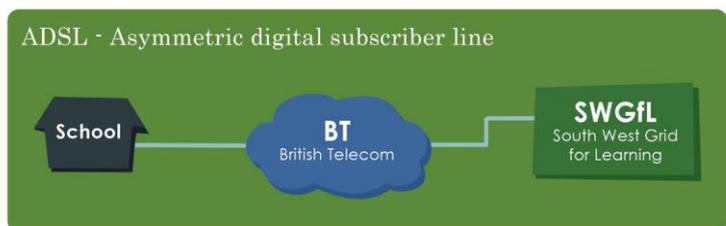
Pros	• Good levels of potential performance • Good value for money • Quick to deploy, where it's available, as it exploits existing infrastructure
Cons	• Performance is not guaranteed (whereas it is with 'leased lines') and BT's 'fault thresholds' are lower than the advertised potential speeds • It's not yet available everywhere (though we can find out if it's available in your area) • There is a level of 'contention' within BT's national network which can affect performance

Service	Downstream Speed	Upstream Speed	Contract Term
FttC	*Up to* 40 Mbps (*Up to* 80 Mbps may be available in some areas)	*Up to* 10 Mbps (*Up to* 20 Mbps may be available in some areas)	Minimum 12 months

1.2.2   What is ADSL?

ADSL stands for 'asymmetric digital subscriber line'.

ADSL is based on traditional broadband technology, like you might have at home, although SWGfL improves the performance by managing it differently.

Pros	• Low charges, both for initial setup and ongoing • Quick to deploy, as it's based on standard technology • Available in most areas
Cons	• Performance is not guaranteed (whereas it is with 'leased lines') and decreases with distance (from the BT exchange) • Upstream performance is usually considerably less than downstream performance • There is a level of 'contention' within BT's national network which can affect performance

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Service	Downstream Speed	Upstream Speed	Contract Term
ADSL Max	*Up to* 8 Mbps	*Up to* 1 Mbps	Minimum 12 months
ADSL2+	*Up to* 20 Mbps	*Up to* 1.3 Mbps	Minimum 12 months
ADSL2+ Annex M	*Up to* 20 Mbps	*Up to* 3.3 Mbps	Minimum 12 months

1.2.3 How do I know if these services are right for me?

As a charity, SWGfL is only here to help you – delivering the right services and providing honest, reliable and expert advice. We can provide an appraisal of these options, based upon your usage patterns; an analysis of technologies available; and their likely 'real world' performance (which can differ from the 'advertised speed') for your specific site.

Drop us a line (sis@swgfl.org.uk) with your main phone number (we use this to perform a line test) and details including number of users, number of devices, and the sorts of things you use (e.g. web browsing, streaming media, learning platform etc) and we'll get back to you.

If you don't have a standard phone line, or if it's in the wrong place, we can help with this too: we're able to order new telephone lines for you and help manage the installation as part of the ADSL or FttC deployment. See www.swgfl.org.uk/telephonelines for more information.

1.3   Options

Most of these services can be delivered to you in two different ways, and the main difference between them is the equipment that's provided at your end (called CPE, or 'customer premises equipment').

1.3.1 Option A

With 'Option A', basic equipment is provided at your site that is capable of running the service effectively, but has a limited feature set. This keeps the initial setup charges low, and as most of the safety and security features and services provided by SWGfL are centralised, doesn't reduce the quality of the service provided.

1.3.2 Option B

With 'Option B', more advanced Cisco CPE (customer premises equipment) is provided, with a larger feature set, compliance with a number of standards (including security standards) and with capability to support more in terms of technical services.

The PSN Encryption Product Assurances Service (PEPAS) was set up by CESG to meet the specific needs of PSN, and to ensure that the encryption services provided by these devices are sufficiently robust to protect data being transferred across networks. SWGfL has worked with Cisco to select PEPAS-compliant devices for Option B.

1.3.3 Which CPE option is right for me?

We'd recommend an Option B service, as the devices are very robust, well featured and specified, and prepare your service for future changes and requirements. The Cisco router provided with Option B allows for more flexibility in the future as it supports a much wider range of services and technologies.

However, there's also cost to consider, and if your budget is tight you may prefer an Option A service with lower setup charges (and slightly lower annual charges too). If you need any help deciding, just get in touch and we'll do our best to advise you.

2. Charges

The SWGfL service is purpose-built for schools and includes a range of important benefits that are unique to SWGfL. You can review these at www.swgfl.org.uk/compare.

2.1 Charges – ADSL Max

2.1.1 One-off Setup Charges

Component	Description	Option A Price	Option B Price
Telecoms – Access	Cost for setting up the access layer circuit	£ 0.00	£ 0.00
Service	Cost for setting up the Core Service	£ 274.50	£ 274.50
CPE	Cost of providing the CPE	£ 0.00	£ 324.56
Total		**£ 274.50**	**£ 599.06**

2.1.2 Recurring Annual Charges

Component	Description	Option A Price	Option B Price
Telecoms – Access	Cost from the telecoms provider for access circuit	£ 900.00	£ 900.00
Service	Cost for provision and management of Core Service	£ 674.11	£ 674.11
CPE	Cost of maintaining and managing the CPE	£ 0.00	£ 32.52
Total		**£ 1,574.11**	**£ 1,606.63**

2.2 Charges – ADSL2+

2.2.1 One-off Setup Charges

Component	Description	Option A Price	Option B Price
Telecoms – Access	Cost for setting up the access layer circuit	£ 0.00	£ 0.00
Service	Cost for setting up the Core Service	£ 274.50	£ 274.50
CPE	Cost of providing the CPE	£ 0.00	£ 324.56
Total		**£ 274.50**	**£ 599.06**

2.2.2 Recurring Annual Charges

Component	Description	Option A Price	Option B Price
Telecoms – Access	Cost from the telecoms provider for access circuit	£ 1,450.00	£ 1,450.00
Service	Cost for provision and management of Core Service	£ 674.11	£ 674.11
CPE	Cost of maintaining and managing the CPE	£ 0.00	£ 32.52
Total		**£ 2,124.11**	**£ 2,156.63**

Sophos Antivirus
Want to pay the best possible price for Sophos Endpoint Protection Advanced?

SOPHOS

We applied the same theory behind procuring your connectivity: buy in bulk, make savings, pass them on to our schools.

As well as award-winning anti-virus protection you also benefit from data loss prevention and other features in one easy-to-use solution.

A school buying on an individual basis would spend approximately £9 per licence.

We have bought, well, A LOT of licences and we are able to pass them on to our customers for £2.95 a licence, valid for three years.

It also comes with a Platinum Support Package which is valid for the term of the licence,

Click here for full details

We're also looking at the same for Microsoft and Adobe software...drop us a line for more info: sis@swgflorg.uk

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2.3   Charges – ADSL2+ Annex M

2.3.1   One-off Setup Charges

		Option A	Option B
Component	**Description**	**Price**	**Price**
Telecoms – Access	Cost for setting up the access layer circuit	£ 0.00	£ 0.00
Service	Cost for setting up the Core Service	£ 274.50	£ 274.50
CPE	Cost of providing the CPE	£ 0.00	£ 324.56
Total		**£ 274.50**	**£ 599.06**

2.3.2   Recurring Annual Charges

		Option A	Option B
Component	**Description**	**Price**	**Price**
Telecoms – Access	Cost from the telecoms provider for access circuit	£ 1,800.00	£ 1,800.00
Service	Cost for provision and management of Core Service	£ 674.11	£ 674.11
CPE	Cost of maintaining and managing the CPE	£ 0.00	£ 32.52
Total		**£ 2,474.11**	**£ 2,506.63**

2.4   Charges - FttC

2.4.1   One-off Setup Charges

		Option A	Option B
Component	**Description**	**Price**	**Price**
Telecoms – Access	Cost for setting up the access layer circuit	£ 0.00	£ 0.00
Service	Cost for setting up the Core Service	£ 304.50	£ 304.50
CPE	Cost of providing the CPE	£ 0.00	£ 324.56
Total		**£ 304.50**	**£ 629.06**

2.4.1   Recurring Annual Charges

		Option A	Option B
Component	**Description**	**Price**	**Price**
Telecoms – Access	Cost from the telecoms provider for access circuit	£ 2,175.20	£ 2,175.20
Service	Cost for provision and management of Core Service	£ 674.11	£ 674.11
CPE	Cost of maintaining and managing the CPE	£ 0.00	£ 32.52
Total		**£ 2,849.31**	**£ 2,881.83**

Question?
Call us on 0845 601 3203 or drop us a line at sis@swgfl.org.uk

Online Safety
Did you know that SWGfL has won four awards?

The BETT Awards recognise outstanding educational products and learning solutions, and with a huge number of entries, are seen as the most prestigious in the sector.

The highly regarded 360 degree safe tool, which is provided free of charge to schools, won the Leadership and Management Solutions award.

To check out 360 for free, just click on the logo:

We also won awards at:

the ISPAs for 'internet safety and security'

the Nominet Internet Awards for 'making the internet safer'

the UK IT Awards in 'Community Project of the Year'

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Current FttC services can provide download speeds of up to 40Mbps and upload speeds of up to 10Mbps. Further developments will make up to 80Mbps download speeds possible in some areas.

It should be noted that FttC is not available everywhere yet. Even if an exchange has been enabled, not all of the exchange's street cabinets may be enabled for FttC, so it may not be the case that every premise connected to an enabled exchange will be able to receive an FttC service.

SWGfL can check your actual availability for you. We can also help to provide the right interim services if FttC is something you might want in the future, but cannot get just yet.

> **SWGfL: Saving _You_ Money**
> SWGfL works hard to save you money across the school, not just on your broadband.
>
> Click here for details or drop us a line.

2.5   More about contention

We manage the large, central connections into BT's network, and the subsequent connection from this national infrastructure into the SWGfL core network.

Whilst all ISPs have the same fixed BT costs, how these are covered and presented does differ.
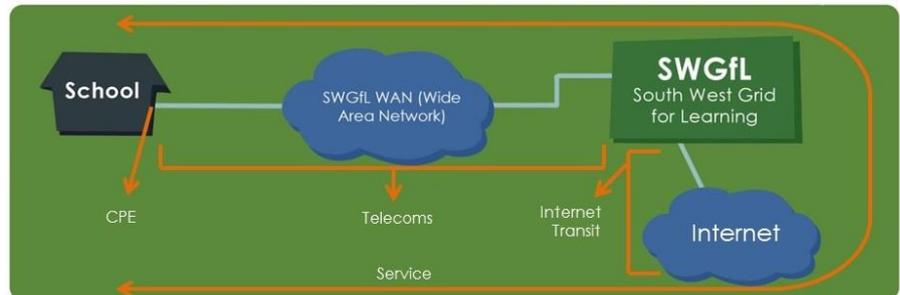
To recover these costs in the UK's competitive broadband marketplace, most ISP's will either:
- Sell more connections than their central capacity can support, introducing high 'contention ratios'
- Charge for bandwidth usage beyond a certain point

Constraining bandwidth at a set level, and then charging for additional bandwidth above this level can work as a service for domestic users where there are often only one or two users intermittently using the connection. Where there are multiple users at a site, all utilising bandwidth at the same time, this can quickly become unviable and expensive.

The SWGfL services do not suffer from these issues. The contention within the core network is managed and maintained at low levels to ensure performance is good. The bandwidth usage is unlimited to avoid unpredictable charges that have not been budgeted for.

2.6   How to order

Download the Request Form here, and complete and return the form (accompanied by a Purchase Order, if you need to raise one) for the service you require.

The lead-time to complete your request is usually less than twenty working days from receipt of Purchase Order and completed Order Form.

All services are provided for 12 months or 36 months unless otherwise stated and all telecoms products are provided by RM IHG at 0% margin.

Charges are exclusive of VAT.

Useful Links:
www.swgfl.org.uk/core -   **the SWGfL Core Service**
www.swgfl.org.uk/choice -   **SWGfL Optional Services**
www.swgfl.org.uk/compare - **SWGfL benefits**
www.swgfl.org.uk/partners -   **SWGfL's partners and supply chain**
www.swgfl.org.uk/terms -   **SWGfL terms and conditions**

South West Grid for Learning
Schools Internet Services

3. Background Information

Who are SWGfL?

The South West Grid for Learning is a not-for-profit charity directed by the 15 Local Authorities in the South West. Originally established in 2000 to deliver the government's requirement for connecting schools safely to the internet and the National Education Network (NEN), SWGfL provides services to over 2,500 schools.

Who do SWGfL work with?

We use a special division within RM - the Internet Hosting Group (IHG), a team focussed on large internet and network services – to deliver the technical aspects of the Schools Internet Services.

We also have a very wide range of other partners, from market leaders to specialist providers.

CISCO
Microsoft
ja.net
RM Education
INTERNET WATCH FOUNDATION
smoothwall
netsweeper
LOGICALIS
Adobe
e-safe education
FlashMeeting
TANDBERG
SOPHOS

What connectivity options do SWGfL offer?

A very wide range - see the back page for details of the different options we provide, or drop us a line for more details. All circuits are provided by RM IHG at 0% margin, and we have a flexible process for you to choose the right solution:

1: Choose your circuit type
2: Choose your contention type
3: Choose your contract duration

How do I know what I need?

We can help. We'll complete an unbiased and independent analysis of your usage and the available technology, and go through your options with you.

Why do schools use SWGfL?

The SWGfL service is purpose-built for schools, including important and unique benefits. You can review these at www.swgfl.org.uk/compare.

Our range of online safety and education services, in addition to the Schools Internet Service, provide schools with exceptional quality at great prices – see below.

Can SWGfL provide more money-saving solutions?

How about our three-year Sophos Endpoint Protection Advanced license for £2.95, with Sophos Platinum Support? At around 80% discount, if you can get the same products cheaper anywhere else, we will refund the difference! Visit https://www.phoenixs.co.uk/swgfl.

We can provide free of charge or heavily discounted SSL certificates too! Just drop us a line for details.

What about online safety?

Beyond the technology, SWGfL has an unrivalled reputation for the quality of online safety advice and expertise.

You'll get access to a lot of this as part of your Schools Internet Service with no additional charges. For more details, visit http://www.swgfl.org.uk/Staying-Safe.

And online safety tools?

Yes, you can access 360 degree safe – the outstanding e-safety self-improvement tool - as well: click the logo.

360 degree safe has won awards at BETT, the ISPAs, the Nominet Internet Awards and the UK IT Awards.

South West Grid for Learning
Schools Internet Services

SW GRID for LEARNING

The SWGfL SIS Core Service

Connectivity
- A very wide range of suppliers and partners and a similarly wide range of technologies to meet a range of needs
- Multiple high performance internet transit links and peering (over 350 peers including Google, NEN, Janet, BBC, Akamai etc.)

Essential Security
- Centralised, managed, enterprise-class Cisco firewalls
- Intrusion detection and prevention and other security technologies
- market-leading Cisco IronPort solution for web/email security
- Service accredited to ISO27001 as well as other standards

Change and Service Management
- ITIL and FITS-based processes
- Technical changes: engineering change, usually free of charge
- Transactional changes: adding to or enhancing services, which can usually be done through ESI
- Strategic change: management of complex or bespoke changes

IP Services
- SWGfL is a Local Internet Registry (LIR)
- /32 IPv6 supernet
- Large PA IPv4 supernet
- Managed private IP and DNS

Support and Technical Services
- Award-winning UK-based and dedicated Service Desk available via phone, email and ESI
- Escalation routes to engineers with high end qualifications (including CCIE, MCSE, RHCE, CISSP etc.)
- 24x7 network monitoring
- 15 years of experience supporting school internet and connectivity services

ESI
- Secure, integrated, user-friendly dashboard
- A simple and quick self-registration process
- Take control of support calls, changes, services, information etc. relating to the service
- http://esi.swgfl.org.uk

Essential Safety
- All traffic passed through SWGfL core network
- Checked against IWF CAIC list to block access to illegal content
- Uniquely, SWGfL works with five Police forces and partners, enabling action on attempts to access illegal content
- Internationally recognised online safety services available from SWGfL

Standards
- Aligned to ISO9001 best practice
- Incident management, business continuity and disaster recovery

Service Monitoring and Reporting
- Easy to use tools showing real time utilisation statistics
- Gather intelligence to support strategic planning and behaviour management

The SWGfL SIS Optional Services

Filtering and Monitoring Services	Email Services	Network and Data Tools and Services	Hosting Services	Video Services

Want more details on the **Core** Services? www.swgfl.org.uk/core	Want more details on the **Optional** Services? www.swgfl.org.uk/choice

Frequently Asked Questions

What's the lead time for delivering a new service?
Typically, within 20 working days for ADSL and FttC-based services, 65 working days for other copper-based services, and 90 days for fibre. Once your order is underway, your project co-ordinator will keep you informed on progress.

What do I need to do about my existing circuit if I'm upgrading?
Once your order is confirmed and underway, we'll work with you on the effective transition to your new service which includes the arrangements for ceasing the existing circuit.

Another provider is offering a cheaper solution, can you match it?
Please give us a call or drop us a line and we'll see what we can do.

What's included in this service?
See the details on the first page, or visit www.swgfl.org.uk/core.

Will there be any other charges?
In some cases 'Excess Construction Charges' (ECCs) may be identified. We can't include these at this stage as we don't know if they'll apply until a site survey is performed. If ECCs are identified, it's highly likely they'll apply to any provider, as they're needed to get the telecoms circuit installed.

ADSL and FttC solutions require a PSTN line. SWGfL can support you to complete a simple site survey to review existing lines and can arrange for a new line(s) if required. Bonded solutions will require more than one line.

Can I cancel an order after I've raised it?
Yes, although there may be a charge associated passed on by our suppliers for administration costs, survey costs etc.

Where can I find Terms and Conditions?
Our full terms and conditions can be found at www.swgfl.org.uk/terms. We'll provide a personalised copy of these when your new service is active.

Circuit Options

ADSL
Uses a standard BT phone line, so charges are low. Higher performing than 'home' ADSL due to our network design. Performance varies: up to 8Mbps on 'ADSL Max' and up to 20Mbps on 'ADSL2+'.

👍 Low charges, and widely available

👎 Slower upstream than downstream, and variable performance

Copper Circuits (EFM)
The connection between the school and the exchange uses bonded copper pairs, but from there it's fibre so symmetric speeds of up to 20Mbps are possible.

👍 Symmetric bandwidth, and cost effective when compared to fibre

👎 Not available everywhere, and not as scalable as fibre

FttC (Fibre to the Cabinet)
AKA 'Superfast Broadband': the circuit from the school to the green cabinet uses a phone line, but it's fibre from there so up to 40Mbps down and 10Mbps up is possible.

👍 High bandwidth at an affordable price, and new technology

👎 Not available everywhere

Fibre Circuits
Very fast, as the whole network is fibre, all the way from the school server room to our core network.

👍 Very high performance, and highly scalable

👎 Can be costly when compared to copper circuits

Wireless and Satellite Solutions
A range of wireless and satellite options for schools that are unable to get copper or fibre circuits.

👍 Available almost everywhere, with predictable installation charges

👎 Can be less flexible and scalable than copper and fibre

Question? Call us on 0845 601 3203 or drop us a line at sis@swgfl.org.uk

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Schools Internet Services