



Dark fibre

What it is and why
your business needs it



Contents

Introduction	3
What is dark fibre?	4
The benefits of dark fibre	5
Who needs dark fibre?	6
How we deliver dark fibre	8
Case studies	9



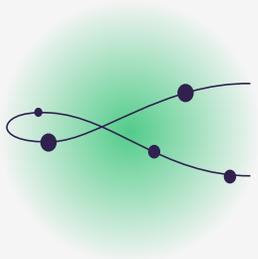
Introduction

At Glide, we connect businesses across the UK and Europe using fibre optic technology. We manage this technology for our customers, ensuring reliable and fast connectivity.

In recent years, more customers have chosen to buy or lease their own fibre from us. The cost gap between this, so called "dark fibre", and traditional leased lines has narrowed, making dark fibre a much more affordable option.



We can now offer dark fibre to your organisation. Over the next few pages, we'll show you why choosing Glide is the right choice.



What is dark fibre?

Dark fibre is simply fibre optic infrastructure that isn't yet in use. It's leased to organisations so they can control it themselves.

Unlike lit fibre, which Managed Service Providers (MSPs) like Glide operate, dark fibre gives you full control. You install your own equipment, light the fibre, and manage the network as you need.

Dark fibre offers unmatched flexibility and scalability. As your organisation grows, you can increase your bandwidth without adding more infrastructure. It's the perfect choice for businesses with high data demands and those looking to future-proof their connectivity.

How dark fibre works

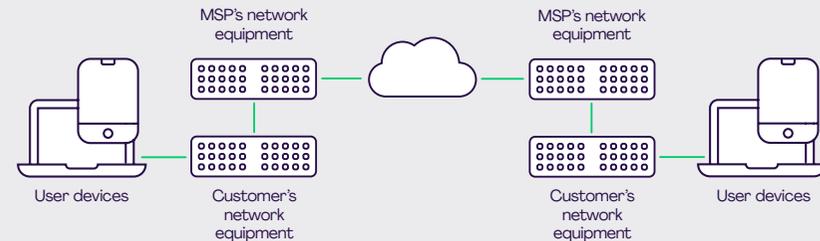
Dark fibre

Customer controls capacity



Leased line

Service Provider controls capacity



The benefits of dark fibre



Scalability

Allowing unlimited bandwidth growth without service provider constraints.



Cost efficiency

Significantly lower long-term costs.



Performance

Fast, reliable, and low-latency, providing resiliency when combined with a managed service.



Security

Offering the highest guaranteed level of security through dedicated connectivity.



Control

You have total control over your network asset.

Who needs dark fibre?

Dark fibre was once just for data centres and internet providers, but now more organisations are finding that the benefits of dark fibre outweigh the costs.

It's ideal for organisations with multiple sites, whether they're close together or spread across the country. What they have in common is that they want full control over their bandwidth, traffic, and flexibility.



The following types of organisation are increasingly opting for dark fibre connectivity:



Large enterprises and corporations

Financial institutions: Banks and financial firms often use dark fibre for secure, high-speed data transmission between branches and data centres.

Media and entertainment companies: These companies require high bandwidth for transmitting large media files and live broadcasts.

Manufacturing firms: They use dark fibre to connect different facilities and support industrial IoT applications.



Public sector and government bodies

Local councils: Councils use dark fibre to connect various municipal buildings, support public Wi-Fi, and enhance smart city initiatives.

Government agencies: They require secure and reliable communication networks for internal operations and public services.



Healthcare sector

Hospital trusts: Hospitals and healthcare networks use dark fibre to connect multiple facilities, ensuring fast and secure access to medical records and imaging data.

Research Institutions: They need high-speed connections for data-intensive research and collaboration with other institutions.



Educational institutions

Universities and colleges: These institutions use dark fibre to connect campuses, support high-speed internet for students and staff, and facilitate research projects.

Multi Academy Trusts: They connect multiple schools within a district to central administrative offices and data centres.



Utility companies

Energy providers: They use dark fibre to monitor and control power grids, support smart metering, and enhance communication between facilities.

Water and waste management: These companies use it for monitoring systems and ensuring efficient operations.



Transportation and logistics

Airports and rail networks: They use dark fibre for operational communications, security systems, and passenger information services.

Shipping and logistics firms: These companies require reliable communication networks for tracking and managing shipments.

How we deliver dark fibre

We look to deliver dark fibre quickly, efficiently, and with minimal disruption.



PIA

If there's an existing duct network, we use PIA (Physical Infrastructure Access) to install fibre through existing ducts and poles. This reduces disruption and costs, delivering dark fibre quickly.

New civils

If not, we design and install custom fibre routes, digging and laying new fibre. Our team ensures minimal disruption during installation. You can see examples of our installations overleaf.

Your options

You can choose from a single strand, fibre pair, multiple pairs, or a sub-duct, based on your needs.

Support and service

We maintain the physical infrastructure, ensuring your asset is supported in case of any issues.



Case studies



Aberdeen City Council

A dark fibre network for traffic lights & cameras

BACKGROUND

While doing some work for the Wireless Infrastructure Group (WIG) to link up mobile cell sites across the city with dark fibre, the council approached us to replace the existing copper infrastructure linking their traffic camera systems with dark fibre. A key objective was to minimise disruption in the busy city centre, so we used existing ducting where possible to lay the required cabling.

SOLUTION

It took three Glide fibre engineers just four weeks to lay 9.5km of fibre connecting all the council's traffic cameras together with 25 traffic light controllers back to their IT hub.



Ark

Innovative solution for a large enterprise in a complex urban environment

BACKGROUND

In 2019, Glide was brought in by Ark's architects to design the duct networks for their new data centre sites. A key project was at Meridian Park, Enfield, where Ark needed us to build infrastructure that would allow third-parties data access to the centre. The site posed unique challenges, being surrounded by the A406 flyover, Edmonton EcoPark, Pymmes Brook, Salmons Brook, a country park and the Lee Valley Navigation.

SOLUTION

Between September and December 2019, we constructed two diverse routes for third-party access, with one route extending 1,800 metres and the other 550 metres. To overcome site constraints, we used directional drilling to excavate 180 metres under a 24-hour Aldi distribution centre, reaching a depth of eight metres. This approach was both cost-effective and minimally disruptive. We installed ducting and multiple subducts to allow third parties to blow their own fibre. Glide continues to manage and maintain the infrastructure, conducting proactive inspections twice a year.



Bournemouth University

A diverse dark fibre link for increased security and reliability

BACKGROUND

Following an initial dark fibre deployment in 2014, we were asked back to complete a second phase of work in 2021 to lay a diverse 6.6km dark fibre circuit connecting the main administration block to the University's main campus, while taking a completely different route.

SOLUTION

Using existing council-owned ducting, a team of Glide engineers laid the fibre over a four-week period. The University now own the dark fibre asset outright.



Glasgow Dental Hospital

A challenging project on a famous city high street

BACKGROUND

In 2014, we were tasked with installing dark fibre to connect Glasgow Dental Hospital on Sauchiehall Street with a main hub located in a large office block at the other end of the street. The fibre would carry sensitive medical records between the hospital and this offsite storage facility. Sauchiehall Street, being one of Glasgow's busiest shopping areas, presented a unique set of challenges for our team.

SOLUTION

We excavated 500 metres of new ducts along Sauchiehall Street and installed fibre between the hospital and the office block. The project required careful coordination with shop and business owners to minimise disruption, with much of the work completed outside of normal business hours. Additionally, our team had to navigate asbestos within the office building while routing the fibre to the required floor. Despite the challenges of working on a busy shopping street and managing the hazardous materials, the project was completed successfully, resulting in another satisfied customer.



Newport City Council

Seamless network upgrade across the city's key sites

BACKGROUND

Newport City Council initiated a project to build a wide area network (WAN) connecting 25 key buildings around the city centre, including the Citizens Advice Bureau, Job Centre, Museum, Art Gallery, Theatre, Swimming Pool, Civic Centre, and two hub sites: the Civic Centre and NISV (a multi-sports facility). The goal was to upgrade the network infrastructure across these sites.

SOLUTION

We replaced older managed leased line circuits with dark fibre connectivity, spanning approximately 15 km of newly installed ducting. The project took 8 months to complete. By forming a strong partnership with the Council's Highways Department, we leveraged existing traffic light ducting at junctions, minimising road excavation and avoiding unnecessary disruption to the city.



Newcastle University

A temporary dark fibre route laid in record time

BACKGROUND

The University approached Glide to connect two buildings in the city with dark fibre. A permanent solution was being sought, but because of ongoing demolition work on the Castle Leazes site, an interim fix was required. Our planner/architect came up with a creative solution that the client was happy with. As there was no existing duct network, the plan was to lay surface-mounted steelwire armoured fibre cabling traversing walls and a subway to link the two sites.

SOLUTION

With two three-man cabling teams working around the clock, it took three days to deploy 800 metres of dark fibre, including all splicing and testing. The client was completely satisfied, and has now engaged Glide to deliver the permanent dark fibre connection once the demolition work has been completed.



SURBITON
HIGH SCHOOL



Surbiton High School

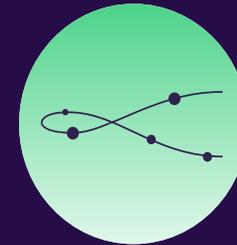
Efficient connectivity for a school's expanding campus

BACKGROUND

In August 2015, Surbiton High School needed to connect several of its buildings: the Boys' Prep, Girls' Prep, the main hall, and the main high school building where the comms room was located. Later, the Sixth Form building was added to the project.

SOLUTION

To meet the school's connectivity needs, we installed 450 metres of external ducting and 1.2 kilometres of cabling. The project required careful planning to avoid newly laid playground areas, using overhead solutions like catenary cabling where necessary. Despite internal cabling challenges, we completed the installation and testing within four weeks—well within the 6-week summer holiday deadline.



Glide's dark fibre connectivity can offer your organisation **resilience, security, flexibility, and freedom** to choose how to use an almost infinite amount of bandwidth.



Fibre is our business.
Let's make it yours.

Contact us today

For more information, speak to
one of our dark fibre experts

Email darkfibre@glide.co.uk

Visit glide.co.uk/darkfibre