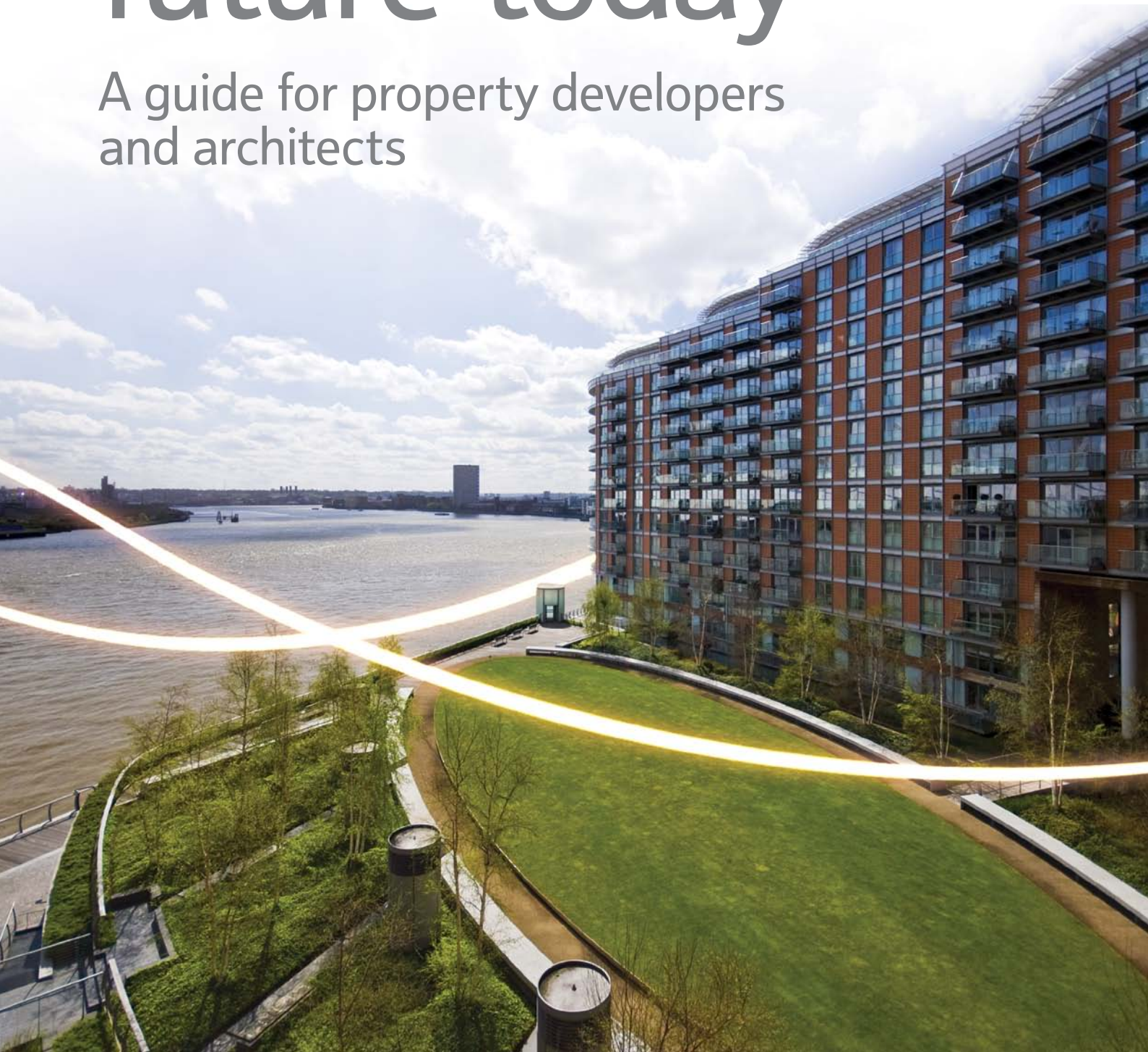
openreach
a BT Group business

Building for the future today

A guide for property developers and architects



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The Openreach solution isn’t just fast.
It’s future proof and almost indestructible.
We love resilient, long-term utility solutions.

Arthur Hughes, Facilities Manager,
New Capital Quay, Galliard Construction.

”

A better future all round

You're building for the future today. So are we. We're building a fibre network* that can add real value to your new developments, by enabling your customers to take advantage of ultrafast broadband speeds of up to 330Mbit/s.

This is the kind of speed that will allow everyone in the homes at your new developments to do their thing online, all at the same time – stream HD films and music, catch up on TV on demand, make HD video calls, play online games, upload photos and video clips to social network sites, you name it!

Your residents will even be able to work from home in exactly the same way as they do in the office, with secure access to the same systems, information and applications.

All of which makes an Openreach fibre network a marketable asset in its own right. Even more so when you consider that we'll be able to make it go a lot faster in the future, without the need for any further disruptive digging. So we've got tomorrow covered as well!

*Fibre all the way from the serving telephone exchange to your new development.

What developments can we connect?

A number of factors affect our decision to connect your development to our fibre network. The serving telephone exchange must be fibre enabled. Without that, there can be no ultrafast broadband connection.

New developments must also be commercially viable propositions for us. Which is why the minimum number of plots we would consider connecting is 25. The more the merrier at the other end of the scale.

We connected 2,818 flats in the 67 blocks at the Olympic Village in Stratford to our fibre network. We looked after the legacy there, too. It's now providing ultrafast broadband services to the tenants occupying the flats.

Another example of the growing number of Openreach ultrafast broadband sites that are up and running is Galliard's New Capital Quay development at North Greenwich. We connected 980 apartments in 12 blocks there. The tenants have now moved in and are benefiting from ultrafast broadband services.

Choice and value for money

An Openreach fibre network offers open access to all the companies that supply ultrafast broadband services – now and in the future. This encourages healthy competition and helps to keep retail prices down.

"In a world of standard broadband, having access to fibre broadband is fantastic. In a world of ultrafast fibre broadband, having access to choice is more important. Which is where we come in."
Martin Porter
Business Development Director, Construction & Local Authorities, Openreach

Copper and ultrafast fibre – the comparison

You will probably be familiar with copper. You've had it installed at your new developments since time immemorial!

Copper as a transmission medium has been around since the days of Alexander Graham Bell. While it can carry information at speeds of up to 20Mbit/s in a digital format, copper was never meant to transport bigger and bigger chunks of data. It was primarily designed to carry analogue signals generated by speech.

Distance doesn't materially affect the quality of voice services delivered over copper. However, it does affect the quality and speed of data transmission. The longer the distance from the telephone exchange to the street cabinet, and from the cabinet to your development, the weaker the data signal becomes.

Ultrafast fibre is an entirely different proposition. It's not distance limited for data in the same way as copper. There are no street cabinets. Your development is served by a fibre link all the way from the serving telephone exchange.

That link can carry massive amounts of information as pulses of light, over far greater distances than copper, without any discernable loss in signal. That's why ultrafast broadband is so much faster than copper.

Less bulk, incredible speed

Fibre cables take up far less space than copper. It would have taken four or five bulky copper cables to provide the 980 apartments at Galliard's New Capital Quay development at North Greenwich with a maximum speed of 20Mbit/s. A single fibre cable is doing the job over 12 times faster than that today, at up to 330Mbit/s.

"It took us a fair while to get our heads around the fact that a fibre cable no thicker than my forefinger could connect nearly 1,000 apartments at ultrafast broadband speeds."
Arthur Hughes
Facilities Manager,
New Capital Quay,
Galliard Construction

What kind of investment will you need to make?

We don't charge to connect new developments to our fibre network. However, it's down to you to ensure that your customers will be able to access ultrafast broadband services wherever they are in their homes from their chosen communications provider.

That's a commercial decision you need to make. It's almost impossible to predict the communications needs of your customers. But one thing's certain. If they're looking to connect their TV or keen online gamers, they'll need to plug their equipment into a physical connection.

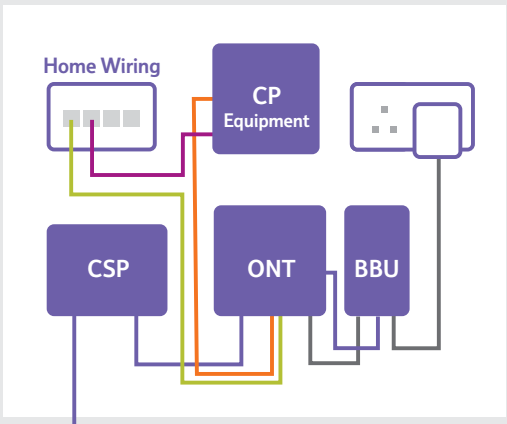
Wireless offers great connectivity for smart portable devices. But when it comes to streaming high bandwidth in a highly reliable manner, the user experience can only be maintained through a prewired socket. And that means providing voice and data sockets to create what's often referred to as the 'connected home'.

"Having fibre going into a property isn't good enough. It's like having a standpipe in your garden. You need to get the water to your bath. This 'internal plumbing' represents a small additional cost, but a very worthwhile one."
Martin Corbett
Business Development Director,
Openreach

Design considerations

You need to bear in mind that the equipment your customers use to access their ultrafast broadband services is not the standard white wall box typically installed in a domestic environment.

Four boxes are required (see diagram), one to connect the fibre to, one for the electronics, one for the power supply and one for battery back up. You can find more details on the layout of this equipment in the Openreach Developers' Guide at **www.openreach.co.uk**.



CSP: Customer Splice Point
ONT: Optical Network Termination
BBU: Battery Backup

Clearly, locating these boxes in a living room or bedroom of smaller apartments is not aesthetically acceptable. So this is something that has to be factored in at the design stage.

At one development of multiple one-bedroom apartments, it was decided that the ideal place to locate these boxes to would be on hidden shelf units in the kitchenettes.

The shelf units were manufactured to a design agreed with the developers and the boxes were attached to them before they arrived on site.

This saved a great deal of time, as our engineers were able to simply slot in the shelves and connect up the appropriate fibre to the appropriate box – a process which guaranteed consistency of installation throughout the development.

Ways you can help us to help you

- Once the fibre cable is in place, it's there for life and very robust. However, compared to installing copper, you need to treat it with care. You can't trample over fibre cable. And you can't bend it at 90-degree angles.
- Your M&E people are used to dealing with copper and leaving just a few centimetres of cable for our engineers to connect to. With fibre, we need around 2 metres of slack fibre at the end of each connection (i.e. in apartments and risers).
- With so much tray work in the risers of the apartment blocks, we sometimes find it difficult to install our splitters* where we need them. If you place wooden boards above the tray work, we can screw our splitters to them, enabling us to work faster, safer and smarter.

Don't forget that our New Site representatives are available to guide you through the installation of our network!

For detailed information about what you need to do to install an Openreach fibre network at your new development, you can download our Developers' Guide at **www.openreach.co.uk.**

*Splitters work like prisms. They split the light from a single main traffic-bearing fibre, allowing it to be shared by people in several apartments.

The benefits of fibre broadband

Whatever you're into, fibre will make it quicker and easier. But let's be clear: it isn't just about doing one thing online much faster. It's about everyone in the home being able to do their own thing online all at the same time. Depending on the broadband package offered by your preferred communications provider, you may be able to enjoy:

Virtual storage

Store photos, documents, music and videos online – in the cloud – rather than on the computer at home.

Home media hub. Anywhere

Access everything you need – telephone, TV, internet radio, videos, photos and files – whether you're in the home, at a friend's or off on holiday.

Video calling

Fibre opens up the world of HD video calling – rope in friends and family around the world and get together for a chat.

Online multiplayer gaming

Faster upload speeds mean budding games developers can host their own levels and share them with others.

Working from home

Whether you work from home full-time, part-time or just now and again, you'll be able to work as effectively as you would in the office.

Video on demand

Stream HD or 3D movies to your TV, watch catch-up services, like BBC iPlayer and access YouTube video channels, online photo albums, live events and personalised radio stations.

Social networking

User generated content (UGC) is the next big online thing, but current upload speeds have been holding people back from taking part. Until now...

Why Openreach?

The quality, reliability and resilience of our fibre network is a given. We're the UK's primary infrastructure provider. Our heritage stretches back more than 150 years, to the days when the telephone was first invented.

The open access we provide for our customers (i.e. the businesses who supply your customers' communications services) promotes healthy competition. This keeps prices down and ensures that no one need be tied to a single supplier.

We spent years learning from international fibre deployments and have incorporated the best of that learning in our own rollout, utilising only tried and trusted technology.

We've been installing fibre in the UK since 2008, honing our skills along the way. You can also be confident that all our deployments are compliant with National Joint Utilities Group guidelines.

If you opt for a fibre infrastructure provider that doesn't offer truly open access in the way that Openreach does, your customers will run the risk of being tied to a single supplier.

We take our environmental responsibilities very seriously. We're committed to building and deploying fibre equipment that meets stringent power consumption limits. We source our energy renewably or from low carbon sources. And we're making significant changes to cut the carbon footprint of our fleet of vehicles.

What we can do

We can create a state-of-the-art communications infrastructure at your new development that will:

- Enable your customers to communicate in exactly the way they want to, now and into the future
- Provide communications supplier choice and therefore the competitive pricing options your customers are looking for
- Make it even more marketable
- Truly stand the test of time.

We’d like to work with you

We want to work with you from the earliest possible stage of your new development. If construction has started, it’s too late!

We’ll help you with your fibre network deployment and make sure you get the equipment, plant and support you need, when you need it.

And we’re ready to take on your ideas and suggestions about ways in which we can improve our processes. In fact, we’d welcome them.

To find out more go to www.openreach.co.uk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