



## Telent Infrastructure Services

Our industry experience, expertise, and market-leading technical capabilities span the full lifecycle of a network, from design, survey and build to the day-to-day operation and maintenance of a telecoms infrastructure. We build and maintain gigabit external network infrastructure for the UK and Ireland's operators.

Bringing decades of experience to the design, deployment and maintenance of network infrastructure, Telent's Infrastructure Services division builds and supports distribution and access networks from the exchange to customer premises for network operators. Offering a managed service approach, Telent can provide an end to end service that covers each step of the way with a professional, tested and trusted service. By leveraging our investment in state-of-the-art processes and systems, we can scale effectively while ensuring delivery certainty with consistently high-quality services. A focus on health and safety is at our core and we assure our services to the latest industry accreditations, regulations and standards.

### Network design and planning

We have the expertise and experience to provide network planning, design and consultancy utilising the latest FTTX technologies and solutions. We provide services from address lists to design or take customer High Level Designs and optimise them including the use of with in-street intrusive survey activities. Our software solutions capture network configurations using GPS stamps, photographs and labels which are placed accurately into a GIS map.

### Pre-planning and survey

We carry out pre-planning preparations and surveying as part of our managed service offering. This includes site survey activities to identify potential challenges in deploying the network as well as opportunities to optimise the design. Our specialist teams capture the site environments using the latest techniques including ground penetrating radar, to locate other utilities, areas of special scientific interest or special engineering difficulties. These are all captured using our tools and can be transposed or linked via an API to our customer systems. We can also carry out desktop surveys to give our customers early visibility of route suitability.

## Staging

In our secure facilities, we can pre-stage equipment on behalf of Service Provider customers. We set up, test and fully configure equipment ready for in-service deployment. Key benefits of this service are reduction of early-life failures, and a reduction of on-site engineering time.

## Route Proving

Infrastructure Services can go into the field to carry out Route Proving by checking there's physical space in the ducts and continuity of route. By test rodding with conventional and continuous rodding systems, we can make sure the infrastructure exists to cable into between two points. Duct cameras are used to capture images from underground of obstacles which are recorded in our systems and analysed by our teams to identify the most economical solution. Red line drawings are provided on our GIS system.

## Physical Infrastructure Access (PIA)

Securing site and physical infrastructure access (PIA) enables us to deploy your networks using Openreach's duct and pole network. With the duct and pole access product, Openreach grants a licence for providers to install fibre in their ducted or overhead network. Telent has extensive experience of the Openreach network with more jobs completed on the network each year than any other service provider.

## Job control

Via our Project Management Office (PMO), we can remotely allocate, coordinate, control and manage the many individual assets out in the field. This streamlined system allows us to identify problems and allocate resources without costly and time-consuming revisits to the field. Using our system our PMO can see the live location and progress of every one of our field resources and every one of our tasks. They can electronically allocate and send a job pack to our operatives. Photographs which come in from site along with video streams allow instant support of all our teams to mitigate build risks. The PMO also ensures standards of the project are defined and maintained in-line with industry regulations.

## Network build

We have a nationwide cable network field force that specialises in the deployment, repair and maintenance of fibre optic and copper cable infrastructure both underground and overhead, including associated civils and new telegraph poles.

We support the rollout of delivery programmes in urban and rural areas providing fibre based ultrafast broadband networks which will achieve the UK governments commitment to achieve gigabit connections to all homes by the mid-2020s.

We can deploy underground ducts, cabling, street cabinets, poles, manholes and undertake all other associated civil works providing a full turnkey solution. We do this for Openreach, installing new fibre broadband and maintaining its existing infrastructure. We have also deployed fibre broadband infrastructure for Virgin Media and broadband provider Gigaclear. Our teams are equipped with state-of-the-art fibre optic testing and splicing equipment including the latest ribbon splicers. Each of our operational teams are tracked and managed centrally by our PMO and project delivery teams. This ensures we deliver optimum service levels at all times.

## Health, Safety, Environment and Quality

Health and Safety underpins everything we do. Working roadside, both on public and private land to deliver state of the art services is a truly safety critical environment. We are fully accredited to work under the New Roads and Street Works Act (NRSWA) and are a founding member of Smart Awards accreditation scheme. We maintain a rigorous self-audit schedule via our field agents and health and safety auditors. We are also accredited to work trackside, delivering rail civils and cabling.

We operate a carbon reduction programme across all of our activities, focussing on reducing emissions and waste through efficient work scheduling, reduced travel times and modern vehicles and equipment. All of our depots maintain strict waste management and disposal processes and regularly audited by our compliance teams.

Our system driven workflow has safety and quality at its heart. Our operatives must complete their works in a prescribed sequence, capturing risks, photographs and test results on site straight in to our mobile application. Method statements, risk management documents and operations manuals are available at the touch of a button when on site via the application.

## Decommissioning and disposal

Our legacy network recovery services have extracted hundreds of thousands of tons of unused copper cables from the ground for processing and onward sale of the metal. Coupled with our planning and design services on ICT assets we allow organisations to consolidate sites and reduce their network footprint. We can then decommission and physically remove equipment, even ensuring the equipment is securely disposed of in accordance with WEEE regulations and other applicable legislation.

## Testing and commissioning

Final testing and commissioning procedures are completed on all types of hardware including fibre and copper continuity testing, OTDR and light loss testing, power certification and the configuration and handover of network management elements.

## Maintenance

As part of our managed service approach, we offer reactive and planned maintenance of ducts, poles, street cabinets and cabling following installation. With more than 50 operational locations, Telent operates a nationwide field service capability, with skills and accreditations across multiple technologies, and can offer a range of defined response times dependent on location and technology. These include options for 2-hour to site, 2-hour fix Service Level Agreements and 24/7/365 incident management response.

Operating 365 days, 24 hours a day, our services have been carefully developed over several years and we are proud of the extremely high levels of performance and customer satisfaction we achieve.

## Training school

Telent operates its own training school at its Chorley location where our team of specialist trainers are equipped with the latest equipment and facilities to provide the necessary training and accreditations. Our focus in Chorley is on full fibre build related technologies and skills but also covers FTTC activities and includes cabling, blowing, splicing, ribbon splicing, excavation, duct laying, pole climbing and working in confined spaces. We train on both underground and overhead networks in Chorley.

## Operative accreditation

Our Training and Accreditation Database (TAD) stores details for all our workforce to ensure the correct training and familiarisation is in place before allocating work to an operative. The system manages the upcoming expiration of existing qualifications and accreditations allowing our teams to pre-plan re-accreditations in good time and maximise operative availability.

## Labour force

Telent has UK-wide field force capability and its direct labour force has up-to-date training to keep pace with changing technology. We have an extensive network of national sub-contractor partners experienced in civils, cabling and poling. Our operatives are skilled in deploying and implementing fibre and copper technologies for customers and we also work with specialist regional sub-contractor partners where required. Telent's labour network uses a three-tier model of direct labour, strategic partner and local subcontractor which allows for a consistent year-round service that can be deployed and delivered at scale. The field force has inspection capabilities, and its fully equipped teams and vehicles have real-time tracking abilities. This ensures that Telent can provide the cutting-edge innovation needed for its customers to continue to thrive and remain ahead of the competition.

## Why Telent?

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## Case studies

### openreach

#### Openreach NEMSA/ONSA

Telent's ongoing contract with Openreach to build out its fibre network includes the construction, maintenance and repair of the BT external telephone infrastructure from the telephone exchange to the end customer premises. Our provision includes running new copper and fibre optic cabling, new street cabinets and all civil engineering works. The civil engineering works included excavation, running ducts and access manholes and the reinstatement of highways and pathways.

#### Openreach BDUK

As part of the BDUK programme, Telent successfully rolled out Fibre-To-The-Cabinet (FTTC) and Fibre-To-The-Premises (FTTP) to four million rural homes in challenging environments. Telent was appointed as BT's preferred supplier in 33 regions delivering superfast and ultrafast connectivity to millions of rural homes. Telent provided a managed service which included the survey, design and planning which helped Openreach deliver on its fibre broadband programme by providing millions of UK homes with access to superfast broadband.

#### Openreach Fibre Cities

Openreach's Fibre First programme aims to bring fibre to homes and businesses, and the FTTP network covers more than two-and-a-half million premises. Aspiring to deliver new digital infrastructure to twenty million premises by the Mid 2020's, Telent is playing a major part in their deployment of a network which is future-proof, consistent and dependable and will support the United Kingdom for years to come.



#### DSLAM Cabinet Programme

Telent successfully installed FTTC quickly on site and with street cabinets that were staged and configured at Telent's Chorley facility. This formed part of Telent's installation of over 78,000

broadband street cabinets since February 2012. Delivering over 350 cabinets per week at the peak, Telent supported BT's target of 90% coverage across the UK by winter 2017.



## Gigaclear

### Gigaclear FTTP

In November 2017, Telent was awarded a major contract with rural broadband specialist Gigaclear to provide ultra-fast full fibre broadband to properties across Somerset and Devon. The project saw Telent help deliver speeds up to 28 times faster than the UK average and be part of a project that was both socially and economically transformative to communities in the South West.

The project used narrow trenching technology to speed up installation times and minimise the impact of disruption on the local communities, delivering services to premises previously struggling with broadband speeds as low as 1Mbps, the network allowed homes and businesses the ability to access speeds of up to 1Gbps.

