



How the National Trust bought fast fibre broadband to their sites

At the White Cliffs of Dover National Trust site in Kent, slow internet was the norm. 12 computers and seven tills were all using one domestic broadband connection.

“On days when most of the computers were in use there was a noticeable slow-down at the till. And some functions, like looking up members’ details, weren’t available at all,” says operations manager Gareth Wiltshire.

But the cable they were using ran through the international part of the Port of Dover,

which made getting fibre broadband to them difficult and expensive. It was the same story across the country.

National Trust needed fast broadband at as many of their sites as possible. But the unique nature of each one made this extra challenging. So they came to Openreach.

With our help, they embarked on their largest ever network transformation programme to bring fibre broadband to more than 200 locations nationwide.

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Dan Romani, National Trust programme manager

The need for connectivity

Each year more than 24 million people go to National Trust properties and sites. To make sure their visits go as smoothly as possible, the Trust uses a lot of networked devices like tills, laptops and tablets. And, like any other business, they now want to use technology to encourage more digital collaboration across the business and improve productivity. That means getting their people using things like video conferencing, centralised IP telephony, storing data in the cloud and so on.

They also want to offer public wi-fi at as many sites as possible and, in future, explore the possibility of augmented reality experiences – for example, when a visitor can use their phone to see how a building might have been used 500 years ago.

All these things need fast, reliable broadband. But in the past lots of their properties were managing on speeds of just 0.5Mbps, making this an impossibility.

“At some of our sites the staff couldn’t even get on the internet, let alone offer visitors their own wi-fi,” says Dan Romani, programme manager at the National Trust. So they contacted Openreach to see how we could help.

New discoveries

Logistical challenges always appear on large projects. Working on listed buildings and protected land added some additional challenges:

- Routes of ducts had to be changed to avoid protected wildlife species and plants, including a colony of rare spiders.
- At various sites we found ancient walls and foundations that no one knew were there.
- Archaeologists had to sieve every single spade-full of earth we dug up.
- At a site near the White Cliffs of Dover the team unearthed the remains of an old prison.

A challenge for fibre

Fibre broadband seemed the obvious solution. But the special circumstances of many of the Trust’s sites made installing this really tricky. “You can’t just dig a trench in the garden of a stately home or through a nature reserve to lay cables,” says Rob Cherry, senior national solutions manager at Openreach. “There are no straight lines on National Trust properties – you’ll always have to go round something, whether that’s a 300 year-old-tree or a rare bird’s nesting area.”

The logistics of this were so problematic that some sites were taking up to four years to get fibre. “We’d always wanted to get fibre installed at the majority of our locations. But the cost and complexity of the work always stopped us doing this,” says Dan Romani.

The other issue was that no one had ever attempted a project of this scale before – 210 protected sites spread across the country. Our usual fibre installation processes just weren’t going to cut it.





Getting bespoke solutions

A tailored solution was needed for each site to deal with their individual quirks. “Openreach is the leading provider of fibre infrastructure. So we knew they could deliver fibre Ethernet on an Open Access Network basis at all our sites,” says Dan.

“And we also knew they could put together a bespoke solution for each location.” After talking with the Trust we decided that EAD – Ethernet Access Direct – would work best for them. It would give them a direct, end-to-end service with no contested bandwidth. It would also build on the investment they’d already made in their existing EAD MPLS network across the UK.

Openreach then worked with the National Trust to survey all their locations and put together estimates and plans for each site. We did this at the start of the project to help with budget and delivery planning, then reviewed each one up to a month before starting work.

This meant that our engineers and National Trust staff and conservationists could work together to make sure each site started on time, had the right special consents in place, and had taken any archaeological considerations into account. We also checked that our overall strategy for the infrastructure took the Trust’s future plans into account, so it could change and grow as they do.

Getting the right people involved

A dedicated Openreach project manager was put in place, who worked only with the National Trust. He had daily calls with them and our contractors to talk about progress.

Our site agents went to meetings at each property before we started work. They would go over the plans and make sure everyone understood the work, its impact and how long it would take. They then went back at the end to sign everything off and carry out final quality checks.

We also put an engineering workforce in place – a specific request of the National Trust. This meant there was always continuity as engineers took knowledge about working on protected sites from one job to the next. And they always knew how to operate in and around National Trust locations.

These tailored project management services added real value. They helped us work with the Trust to get processes in place that we could reuse at other sites.

Openreach services delivered to the National Trust

- **NIA:** Network in Advance
- **EAD:** Ethernet Access Direct

A great result

The new fibre infrastructure meant reliable broadband and increased bandwidth at all the National Trust sites we worked at. This has made the day-to-day lives of the people that work there much better. It's also moved the Trust one step closer to the interactive visitor experiences they want.

"We have a much more reliable and consistent internet service here at Dover," Gareth Wiltshire says. "There isn't a slow down when we have a lot of users on site. We've also been able to look at service options like internet phones, which would have been unthinkable before the new connection."

Another positive is that better broadband is helping the Trust become more sustainable. That's because access to fibre means more video conferences and WebEx, and less travel to meetings. With 10,000 employees and 65,000 volunteers, cutting these travel costs could make a real difference to reducing the Trust's overall carbon footprint.

We're happy to say that the National Trust is pleased with how everything's gone so far. As Dan says: "The way Openreach has gone about this project has been really impressive. I wouldn't hesitate to recommend them to any organisation working on a large-scale transformation project."

"If our engineers found something archaeologically interesting on a site we had to stop digging. So we'd move the team on to another part of the project while the National Trust investigated it. That meant we could be really flexible and keep everything on track."

**Gavin Dixon, Openreach
project manager**

How we can help you

Here at Openreach we're hopeful that the network improvements we've made as part of this project could mean better wi-fi for other customers in remote locations as well. We can work with any organisation, small or large, to deliver fibre infrastructure anywhere in the UK – whether that's connecting isolated communities with slow speeds or connecting multiple sites. Get in touch with us today.

About the National Trust

The National Trust is Europe's largest conservation charity. Founded in 1895, it works to preserve and protect over 500 historic properties and spaces. It's one of the largest private landowners in the UK with

over 248,000 hectares of land, including several sites of natural beauty. The Trust is funded by membership subscriptions, entrance fees, legacies and money from gift shops and restaurants in its properties.



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PHME: 84969