

CHALKE MOBILE

Bringing High Speed Mobile and Internet to the Chalke Valley

"The village hall in Bowerchalke is an unlikely setting for a mobile technology revolution. Yet local residents have spent three years forging a mobile phone network to bridge their own 'digital divide'.

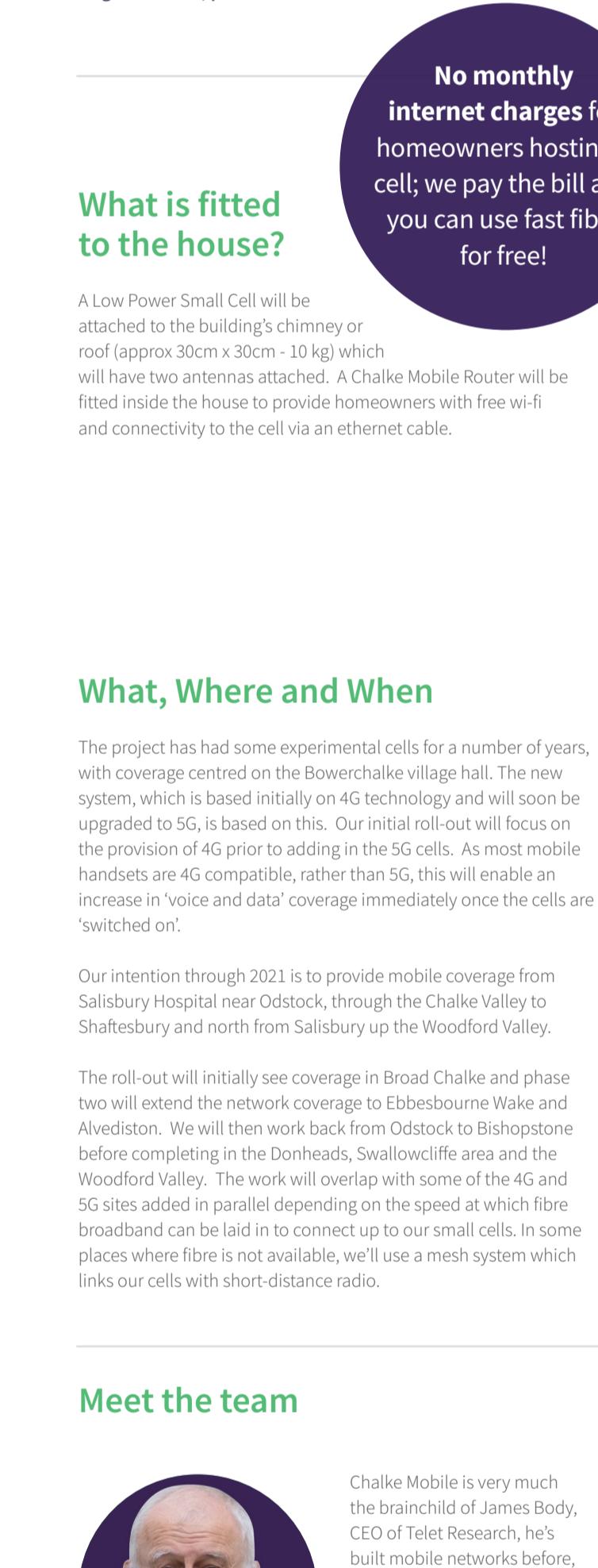
Financial Times, September 2020

Residents will connect at speeds of up to **120Mb per second**, twice the national average.

The Chalke Valley is England's largest mobile phone blackspot. Residents and businesses have been frustrated for too long by poor quality phone reception and unacceptably slow internet speeds, and the real impact of this has only been highlighted further by our struggle to stay connected in the last year.

Despite various initiatives by EE, O2, Three and Vodafone to provide coverage, we've seen little improvement. It is time for a different approach, and Chalke Mobile is just that. A mobile phone network for the residents of the Chalke Valley, by the residents of the Chalke Valley.

With a £2.3m grant through the Department of Culture Media and Sport's (DCMS) Rural Connected Communities programme, Chalke Mobile is building the network the Chalke Valley needs and is looking to extend the network further into the Woodford Valley.



How Can Residents Get Involved?

Chalke Mobile is a true community project, and can only exist with the support of the residents of the Chalke Valley and Woodford Valley. By hosting a cell on their roofs and chimneys, householders will be integral to the structure of our network, and pave the way for a new era of connectivity without impacting on the beautiful surrounding environment.

Residents will be approached directly by a member of the Chalke Mobile team, based on the suitability of their property. There is no obligation to commit to hosting a cell, and our team will be on-hand to answer any of your questions before, during and after the installation.

To get involved, please call 01722 516003

No monthly internet charges for homeowners hosting a cell; we pay the bill and you can use fast fibre for free!

A Low Power Small Cell will be attached to the building's chimney or roof (approx 30cm x 30cm - 10 kg) which will have two antennas attached. A Chalke Mobile Router will be fitted inside the house to provide homeowners with free wi-fi and connectivity to the cell via an ethernet cable.

What is fitted to the house?

The project has had some experimental cells for a number of years, with coverage centred on the Bowerchalke village hall. The new system, which is based initially on 4G technology and will soon be upgraded to 5G, is based on this. Our initial roll-out will focus on the provision of 4G prior to adding in the 5G cells. As most mobile handsets are 4G compatible, rather than 5G, this will enable an increase in 'voice and data' coverage immediately once the cells are 'switched on'.

Our intention through 2021 is to provide mobile coverage from Salisbury Hospital near Odstock, through the Chalke Valley to Shaftesbury and north from Salisbury up the Woodford Valley.

The roll-out will initially see coverage in Broad Chalke and phase two will extend the network coverage to Ebbsbourne Wake and Alvediston. We will then work back from Odstock to Bishopstone before completing in the Donheads, Swallowcliffe area and the Woodford Valley. The work will overlap with some of the 4G and 5G sites added in parallel depending on the speed at which fibre broadband can be laid in to connect up to our small cells. In some places where fibre is not available, we'll use a mesh system which links our cells with short-distance radio.

What will happen to current internet contracts?

There is no obligation for homeowners to terminate their agreement and incur additional costs, both can be run side by side. We are bringing free fibre connectivity for at least 18 months, which will be a vast improvement on a 'copper last mile'. Homeowners could change over as they see fit but we would recommend they take advantage of the fibre as soon as they can.

Will homeowners need to change their household insurance?

We do not believe that this is necessary but we advise homeowners to check with their own Household Insurers. This is similar to hosting a Sky dish.

Why aren't the big Mobile Network Operators providing rural coverage?

Engineering mobile coverage across the UK is difficult and expensive, with operators often prioritising more lucrative towns and cities over more rural areas. Conventional solutions involve the erection of large masts with fibre connections and power; finding acceptable sites is time consuming and expensive. The investment required is far greater than the commercial returns. While the Government is working with the operators to fund the Shared Rural Network (SRN), its priorities are the large, unserved areas of Scotland and Wales. They aim to provide good 4G coverage from at least one operator. Chalke Mobile provides good 4G and 5G coverage from all operators.

How will fibre be installed into the house?

We are initially identifying houses whose location is both ideal for hosting one of our cells and near an existing fibre node. This allows our Internet Service Providers (ISP) partners, to bring fibre into the property. Our partners will discuss with homeowners the ideal routing. The process is likely to require a very small hole to be drilled in the wall to bring the fibre in from the outside. The fibre will then connect to a termination box on the wall.

What will happen to current internet contracts?

There is no obligation for homeowners to terminate their agreement and incur additional costs, both can be run side by side. We are bringing free fibre connectivity for at least 18 months, which will be a vast improvement on a 'copper last mile'. Homeowners could change over as they see fit but we would recommend they take advantage of the fibre as soon as they can.

Will homeowners need to change their household insurance?

We do not believe that this is necessary but we advise homeowners to check with their own Household Insurers. This is similar to hosting a Sky dish.

How will the cell receive power and internet connectivity?

Internet connectivity from the router to the cell will be delivered either by fibre optic or ethernet cable depending on which cell is being used for the property. The ethernet system provides both connection and power so only one cable needs to be run. For cells with a fibre optic connection, a second cable will be routed alongside the fibre and this will require a normal 13amp socket. All wiring is small and discreet.

Where on the house will the cell go?

Installers will come and liaise with homeowners in advance. They will look at the best site for the cell, routes for cabling and where the router will be located. Cells are often placed under the eaves or on a chimney with power and data run down to reach the router and domestic wall socket or an outside socket if there is one. Another option is to host the cell in the attic. If the homeowners are not happy with the options we will not install a cell.

What happens when the DCMS money runs out? Who is responsible for maintenance and replacement of the equipment, and the rental of the line?

All costs, beyond the electricity to power the apparatus, are our responsibility. Our Business Plan is to continue to work with the ISPs after the DCMS programme and pay for the fibre connectivity to all properties. We hope therefore that this will provide free fibre for the considerable future. Should it not work out this way, then we will have provided the expensive 'last mile' to the house and occupants can then ask any ISP to connect with fibre.

Are there any risks involved in having the cells installed?

All data will be encrypted as you would expect from any of the main mobile providers, so data security for homeowners is not affected.

The boxes themselves will be installed only if the site is deemed fit for purpose, and with the express permission of the occupants.

For more information please contact ed.gairdner@chalkemobile.co.uk or call 01722 516003

CHALKE MOBILE

chalkemobile.co.uk

"In a time like the present, with lockdowns and friends and family at a distance, Chalke Mobile's determination to connect people seems more important than ever.

New Valley News, Sept 2020

Meet the team

Chalke Mobile is very much the brainchild of James Body, CEO of Telet Research, he's built mobile networks before, both as a founder of the international mobile network operator Truphone and in hostile environments as an officer in the Royal Signals.

James Body

With extensive experience in the charity sector, Chalke Mobile Director Jonathan Andrew set up and operates Chalke Mobile as a not-for-profit Community Interest Company. He looks after investment and relationships to bring 5G to the UK's largest Not Spot.

Jonathan Andrew

A mix of business, charity and military experience defines Telet Research Chief Operating Officer Ed Gairdner. Both as a Major in The Queen's Royal Hussars, and as Chief-of-Staff to Dragon's Den entrepreneur James Caan, Ed is focused on delivery.

Edward Gairdner

A master inventor at IBM, Chalke Mobile Director Dr John Ibbotson was a member of IBM's Emerging Technology Services group at the Hursley laboratory, Winchester. An expert on process improvement and the application of Service Oriented Architectures to wireless networks.

John Ibbotson

Who is doing the work?

Chalke Mobile is a community interest company, a not-for-profit organisation set up to work with residents of the area. The technology comes from Telet Research, a company founded in Bowerchalke but which punches well above its weight, having the same licencing as EE, O2, Three and Vodafone to provide mobile services.

Founded by James Body and Andy Smith, the company knows the Chalke Valley exceptionally well. James was recently chair of the local council and is working with the Cranborne Chase Area of Outstanding Natural Beauty to minimise the impact of taking the Chalke Valley from one of the worst connected places in the country to being one of the best.

Hosting a Chalke Mobile cell will help bring connectivity to the entire community

See chalkemobile.co.uk/contact

Diagram illustrating the Chalke Mobile network architecture:

The diagram shows a house with a chimney. On top of the chimney is a 'TELET RESEARCH BASE STATION ANTENNA'. A 'TELET RESEARCH NETWORK ROUTER' is connected to the antenna and to the house's interior. Inside the house, a 'DATA CABLE' connects the router to a 'FIBRE TO THE PREMISES OUT (OPTICAL NETWORK TERMINATOR)'. This terminator is connected to a 'Fibre to the Cloud' icon.

Diagram illustrating the Chalke Mobile network architecture:

The diagram shows a house with a chimney. On top of the chimney is a 'TELET RESEARCH BASE STATION ANTENNA'. A 'TELET RESEARCH NETWORK ROUTER' is connected to the antenna and to the house's interior. Inside the house, a 'DATA CABLE' connects the router to a 'FIBRE TO THE PREMISES OUT (OPTICAL NETWORK TERMINATOR)'. This terminator is connected to a 'Fibre to the Cloud' icon.

Diagram illustrating the Chalke Mobile network architecture:

The diagram shows a house with a chimney. On top of the chimney is a 'TELET RESEARCH BASE STATION ANTENNA'. A 'TELET RESEARCH NETWORK ROUTER' is connected to the antenna and to the house's interior. Inside the house, a 'DATA CABLE' connects the router to a 'FIBRE TO THE PREMISES OUT (OPTICAL NETWORK TERMINATOR)'. This terminator is connected to a 'Fibre to the Cloud' icon.

Diagram illustrating the Chalke Mobile network architecture:

The diagram shows a house with a chimney. On top of the chimney is a 'TELET RESEARCH BASE STATION ANTENNA'. A 'TELET RESEARCH NETWORK ROUTER' is connected to the antenna and to the house's interior. Inside the house, a 'DATA CABLE' connects the router to a 'FIBRE TO THE PREMISES OUT (OPTICAL NETWORK TERMINATOR)'. This terminator is connected to a 'Fibre to the Cloud' icon.

Diagram illustrating the Chalke Mobile network architecture:

The diagram shows a house with a chimney. On top of the chimney is a 'TELET RESEARCH BASE STATION ANTENNA'. A 'TELET RESEARCH NETWORK ROUTER' is connected to the antenna and to the house's interior. Inside the house, a 'DATA CABLE' connects the router to a 'FIBRE TO THE PREMISES OUT (OPTICAL NETWORK TERMINATOR)'. This terminator is connected to a 'Fibre to the Cloud' icon.

Diagram illustrating the Chalke Mobile network architecture:

The diagram shows a house with a chimney. On top of the chimney is a 'TELET RESEARCH BASE STATION ANTENNA'. A 'TELET RESEARCH NETWORK ROUTER' is connected to the antenna and to the house's interior. Inside the house, a 'DATA CABLE' connects the router to a 'FIBRE TO THE PREMISES OUT (OPTICAL NETWORK TERMINATOR)'. This terminator is connected to a 'Fibre to the Cloud' icon.

Diagram illustrating the Chalke Mobile network architecture:

The diagram shows a house with a chimney. On top of the chimney is a 'TELET RESEARCH BASE STATION ANTENNA'. A 'TELET RESEARCH NETWORK ROUTER' is connected to the antenna and to the house's interior. Inside the house, a 'DATA CABLE' connects the router to a 'FIBRE TO THE PREMISES OUT (OPTICAL NETWORK TERMINATOR)'. This terminator is connected to a 'Fibre to the Cloud' icon.

Diagram illustrating the Chalke Mobile network architecture:

The diagram shows a house with a chimney. On top of the chimney is a 'TELET RESEARCH BASE STATION ANTENNA'. A 'TELET RESEARCH NETWORK ROUTER' is connected to the antenna and to the house's interior. Inside the house, a 'DATA CABLE' connects the router to a 'FIBRE TO THE PREMISES OUT (OPTICAL NETWORK TERMINATOR)'. This terminator is connected to a 'Fibre to the Cloud' icon.

Diagram illustrating the Chalke Mobile network architecture:

The diagram shows a house with a chimney. On top of the chimney is a 'TELET RESEARCH BASE STATION ANTENNA'. A 'TELET RESEARCH NETWORK ROUTER' is connected to the antenna and to the house's interior. Inside the house, a 'DATA CABLE' connects the router to a 'FIBRE TO THE PREMISES OUT (OPTICAL NETWORK TERMINATOR)'. This terminator is connected to a 'Fibre to the Cloud' icon.

Diagram illustrating the Chalke Mobile network architecture:

The diagram shows a house with a chimney. On top of the chimney is a 'TELET RESEARCH BASE STATION ANTENNA'. A 'TELET RESEARCH NETWORK ROUTER' is connected to the antenna and to the house's interior. Inside the house, a 'DATA CABLE' connects the router to a 'FIBRE TO THE PREMISES OUT (OPTICAL NETWORK TERMINATOR)'. This terminator is connected to a 'Fibre to the Cloud' icon.

Diagram illustrating the Chalke Mobile network architecture:

The diagram shows a house with a chimney. On top of the chimney is a 'TELET RESEARCH BASE STATION ANTENNA'. A 'TELET RESEARCH NETWORK ROUTER' is connected to the antenna and to the house's interior. Inside the house, a 'DATA CABLE' connects the router to a 'FIBRE TO THE PREMISES OUT (OPTICAL NETWORK TERMINATOR)'. This terminator is connected to a 'Fibre to the Cloud' icon.

Diagram illustrating the Chalke Mobile network architecture:

The diagram shows a house with a chimney. On top of the chimney is a 'TELET RESEARCH BASE STATION ANTENNA'. A 'TELET RESEARCH NETWORK ROUTER' is connected to the antenna and to the house's interior. Inside the house, a 'DATA CABLE' connects the router to a 'FIBRE TO THE PREMISES OUT (OPTICAL NETWORK TERMINATOR)'. This terminator is connected to a 'Fibre to the Cloud' icon.

Diagram illustrating the Chalke Mobile network architecture:

The diagram shows a house with a chimney. On top of the chimney is a 'TELET RESEARCH BASE STATION ANTENNA'. A 'TELET RESEARCH NETWORK ROUTER' is connected to the antenna and to the house's interior. Inside the house, a 'DATA CABLE' connects the router to a 'FIBRE TO THE PREMISES OUT (OPTICAL NETWORK TERMINATOR)'. This terminator is connected to a 'Fibre to the Cloud' icon.

Diagram illustrating the Chalke Mobile network architecture:

The diagram shows a house with a chimney. On top of the chimney is a 'TELET RESEARCH BASE STATION ANTENNA'. A 'TELET RESEARCH NETWORK ROUTER' is connected to the antenna and to the house's interior. Inside the house, a 'DATA CABLE' connects the router to a 'FIBRE TO THE PREMISES OUT (OPTICAL NETWORK TERMINATOR)'. This terminator is connected to a 'Fibre to the Cloud' icon.

Diagram illustrating the Chalke Mobile network architecture:

The diagram shows a house with a chimney. On top of the chimney is a 'TELET RESEARCH BASE STATION ANTENNA'. A 'TELET RESEARCH NETWORK ROUTER' is connected to the antenna and to the house's interior. Inside the house, a 'DATA CABLE' connects the router to a 'FIBRE TO THE PREMISES OUT (OPTICAL NETWORK TERMINATOR)'. This terminator is connected to a 'Fibre to the Cloud' icon.

Diagram illustrating the Chalke Mobile network architecture:

The diagram shows a house with a chimney. On top of the chimney is a 'TELET RESEARCH BASE STATION ANTENNA'. A 'TELET RESEARCH NETWORK ROUTER' is connected to the antenna and to the house's interior. Inside the house, a 'DATA CABLE' connects the router to a 'FIBRE TO THE PREMISES OUT (OPTICAL NETWORK TERMINATOR)'. This terminator is connected to a 'Fibre to the Cloud' icon.

Diagram illustrating the Chalke Mobile network architecture:

The diagram shows a house with a chimney. On top of the chimney is a 'TELET RESEARCH BASE STATION ANTENNA'. A 'TELET RESEARCH NETWORK ROUTER' is connected to the antenna and to the house's interior. Inside the house, a 'DATA CABLE' connects the router to a 'FIBRE TO THE PREMISES OUT (OPTICAL NETWORK TERMINATOR)'. This terminator is connected to a 'Fibre to the Cloud' icon.

Diagram illustrating the Chalke Mobile network architecture:

The diagram shows a house with a chimney. On top of the chimney is a 'TELET RESEARCH BASE STATION ANTENNA'. A 'TELET RESEARCH NETWORK ROUTER' is connected to the antenna and to the house's interior. Inside the house, a 'DATA CABLE' connects the router to a 'FIBRE TO THE PREMISES OUT (OPTICAL NETWORK TERMINATOR)'. This terminator is connected to a 'Fibre to the Cloud' icon.

Diagram illustrating the Chalke Mobile network architecture:

The diagram shows a house with a chimney. On top of the chimney is a 'TELET RESEARCH BASE STATION ANTENNA'. A 'TELET RESEARCH NETWORK ROUTER' is connected to the antenna and to the house's interior. Inside the house, a 'DATA CABLE' connects the router to a 'FIBRE TO THE PREMISES OUT (OPTICAL NETWORK TERMINATOR)'. This terminator is connected to a 'Fibre to the Cloud' icon.

Diagram illustrating the Chalke Mobile network architecture:

The diagram shows a house with a chimney. On top of the chimney is a 'TELET RESEARCH BASE STATION ANTENNA'. A 'TELET RESEARCH NETWORK ROUTER' is connected to the antenna and to the house's interior. Inside the house, a 'DATA CABLE' connects the router to a 'FIBRE TO THE PREMISES OUT (OPTICAL NETWORK TERMINATOR)'. This terminator is connected to a 'Fibre to the Cloud' icon.