

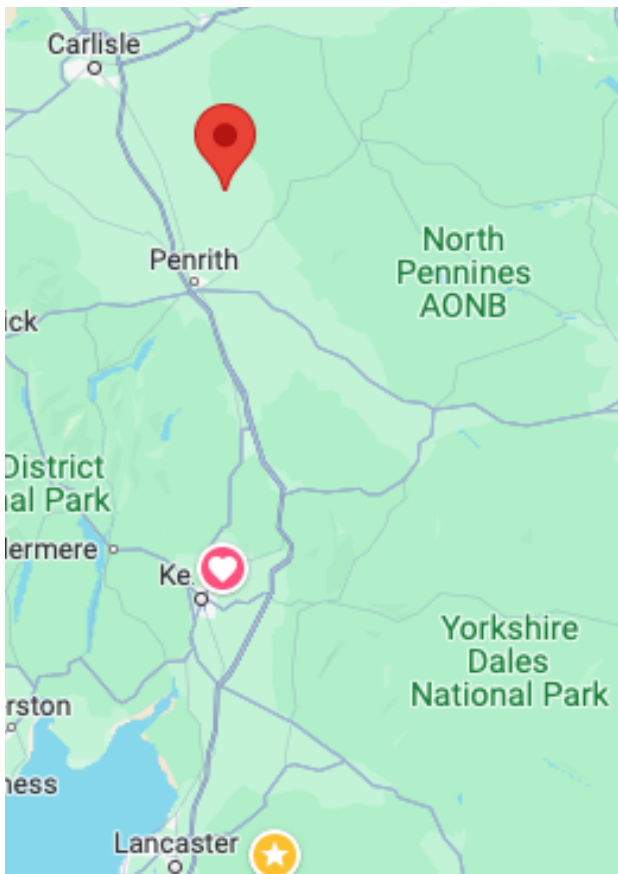
## Chapter 18

Melmerby / Gamblesby / Kirkoswald  
Great Salkeld and Mungrisdale

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This group was a B4RN baby. This means it did not join on from another village in the way that the early projects had.

Similar to Mint and Sprint and the Allen Valley projects, it had its own breakout point on the Zayo fibre. Therefore, because it was so remote from the other projects, the community did not have the same peer support. Instead they had the newly-formed help squads from B4RN, which had taken on Staff to cope with the demands of the voucher funding, civils work and training.

This was all quite new and everyone had a lot to learn. It was all part of the process of making B4RN into a professional telecoms company.



Alison and Bill.



Sam, Nick and Stan with Andrew planning routes.

## Melmerby

By Allison Smith

B4RN in Melmerby had a rather bumpy ride. Poor Stan Jenkins had to kick-start the campaign by addressing the Melmerby parish council on Zoom during Covid on 23<sup>rd</sup> March 2021—not an auspicious beginning.

Fortunately, local major property owners, the Rowley family, were quick to see the opportunities and advantages of superfast broadband in the area. This made the installation of the connection from Melmerby to Kirkoswald via Gamblesby reasonably straightforward.

Some properties in Melmerby were connected along the route. The Melmerby cabinet was installed in May 2022 with connections along Route 1 which was part of phase 1, beginning in June 2022.

Several operators already supplied variations of broadband in Melmerby village itself (B4RN Phase 2). While the service some people received was dire, others including me, were quite satisfied, thinking, 'If it ain't broke, don't fix it.'

I thought that if somebody else pursued the B4RN project then I would probably join in. But eventually it dawned on me that I was going to be the 'somebody else'.

A public meeting was held on 16<sup>th</sup> March 2022, which led me to ask a few more questions, and another public meeting on 29<sup>th</sup> November 2022. It's fair to say that the project had not built up much steam.

I think for me it was the ethos of the way B4RN operated that flicked the switch from vague supporter to B4RN Activist. I was impressed by their basic fairness—to deliver to the 'hard to reach areas' the same service that people in city centres assume as a right. I loved that the village hall and church had a free service and so would the village school if we still had one. I wanted a service that had an active and available real person help desk. As a Community Benefit Society, B4RN weren't interested in big profits.

We had been with BT for years and they had basically exploited the fact that we aren't people who choose to spend our time shopping around; B4RN was going to be a much faster service at a much lower price. They even had a lower rate for people who were eligible for a reduction in council tax. The only issue, then, was to explain all this to other people.

I joined Bill Burford, Andrew Woodhead, David Bardsley and Nicky Burrow in forming a small working party and we met regularly to monitor our progress. There was suspicion about this new broadband provider; at least one person assumed that I was being paid to advocate on B4RN's behalf. The low point for me was when I met with hostility from a local farmer whose land would usefully have been an integral part of the 'soft dig'. The high point was a Friday evening with the farmers in the pub. They applied their local knowledge, generosity and grasp of the potential for the new broadband to benefit future generations to enable the project to proceed.

House by house, wayleave by wayleave, and pledge by pledge we slowly built our way to the tipping point and B4RN were eventually able to deliver to the village with the first connection being made on May Day 2024.



Joe Brown and James Clapham bring the Melmerby cabinet live.

Now, 40% of the properties have a B4RN service, with a trickle of new customers coming all the time.

Melmerby dug 8 kilometres of trench in preparation for their own project (which is still underway), the first cabinet for this area was sited there to feed Kirkoswald etc.

# Kirkoswald

By Brian Smythe and Sue Quinn

Kirkoswald is a rural parish in the Eden Valley. It consists of two main villages, Renwick and Kirkoswald, and several hamlets, Parkhead, Highbank Hill, Staffield, Scales, Scalehouses, Busk, Scarrowmannick, Blunderfield and Outhwaite .

The parish ranges from the River Eden up the Pennines to Hartside. The Raven Beck and Croglin Beck mark the boundaries in the opposite direction. The parish contains many rural and remote farms in hidden valleys or up rough tracks, which poses a challenge to any but the best provider of high speed broadband. The need for better connectivity was identified in May of 2012 as part of the Kirkoswald Parish Council Community Plan.

## History of the beginnings of the project

Brian Smythe bought his current home in Parkhead in Kirkoswald Parish in June 2007 and he tracked opportunities to acquire faster broadband (more than 2Mbps). He followed the government procurement that resulted in fibre to the cabinet contract for every region in the UK being awarded to BT Openreach in approximately 2012 . Brian briefed both Kirkoswald and Lazonby parish councils on progress at PC meetings. He also became part of the Connecting Cumbria group and reported back about this group to the parish councils.

The FTTC technology inevitably meant that this solution would do virtually nothing for properties more than one mile from the cabinet. Anyone outside Kirkoswald village would see no benefit, but those within the village could expect a minimum of 50Mbps.

LonsdaleNet was established in 2012. It offered a wireless broadband service that provided approximately 20 Mbps for all properties with a line of sight to their aerials. The LonsdaleNet service reached about 70% of rural properties in Kirkoswald parish, but still left a significant number of properties with less than 2 Mbps and some with no practical connection.

The BT Openreach FTTC service went live in 2014/15, but in addition to distance limitations, the technology could become overloaded resulting in slow performance.

Until 2020, none of the government voucher support schemes for delivering full fibre solutions provided sufficient funds to create a viable project for Kirkoswald parish. The Rural Gigabit Voucher Scheme (RGVS) announced by Building Digital UK (BDUK) in June 2020 was the first scheme that appeared to create the opportunity to completely fund a full fibre project for Kirkoswald parish.

A group of parish councillors began work with Brian to establish who in the area would wish to donate their voucher to the scheme. To do this we enlisted the help of many volunteers throughout all the different areas of the parish. More than 98% of the residents outside Kirkoswald village pledged their vouchers.



BDUK defined three organisations that would be eligible to benefit from this RGVS, namely BT Openreach, B4RN and LonsdaleNet/Voneus. We approached all three organisations and asked them to provide a preliminary budget for a network that would enable us to connect every property with full fibre.

BT Openreach stated that they would have to invest £0.5m in infrastructure before they could provide an estimate. LonsdaleNet stated that they could do the project within the likely voucher budget but would not commit to connecting every property.

Tom Hurst from B4RN visited and explained the B4RN approach that included a commitment to connect every property in the parish. He also stated that, with a 50% take-up on the vouchers, we would have a funded project.

## **The Kirkoswald B4RN Project**

With the support of the parish council and the volunteer coordinators who had leafleted all the homes in the parish, Brian Smythe and Sue Quinn (then chair of Kirkoswald Parish Council) agreed to go ahead with B4RN in October 2020.

Recruitment of further volunteers commenced immediately with the support of Kirkoswald Parish Council.

The first two key tasks were the negotiating of wayleaves with all landowners over whose property the fibre ducting would be installed, and secondly, the commitment by as many of the property owners in the parish of their RGVS vouchers in order to create the funding for the project.

Brian Smythe negotiated the wayleaves with the landowners with the help of information packs, as we were under Covid lockdown conditions that made public meetings impossible.

Sue Quinn alongside two other parish councillors, Jane Tea and Wendy Smith, recruited and coordinated a team of volunteers to visit every property and gain their commitment to pledging their RGVS vouchers. The wayleaves and sufficient RGVS vouchers (60% of properties) were in place by March 2021. This enabled B4RN to submit their application to BDUK for project approval. There was then a six-month delay before the formal project approval was granted by BDUK.

B4RN's contractors, Robson Plant, were able to start work with their mole-ploughs in October 2021. By this stage we had assembled a large team of volunteers who, following training by B4RN staff, assisted with many of the tasks in support of the installation of the ducting and other infrastructure, and coordination between residents and the contractors.

We were extremely grateful to both the volunteers and the landowners in supporting B4RN and their contractors and facilitating the rapid progress of the project. This also included the provision of temporary storage sites for supplies and equipment.

## Gamblesby and Unthank

By Dave Henderson

To start the project a breakout point had to be established to bring in the B4RN feed. Melmerby was decided upon, and the route to Kirkoswald would be dug from there. In between the two villages was Gamblesby, with 87 properties, and the satellite hamlet of Unthank, with 13 properties.

Gamblesby was primarily served by FTTP from Voneus (formerly LonsdaleNet). This was a service that had originally been a pilot, installed by LonsdaleNet in 2016-18, replacing an unreliable (20-30Mbps) radio signal WAN (wide area network). The newer system was a sub-75Mbps FTTP service, backhauled using a village-based dish and a microwave feed from a transmitter on Fiends Fell above the village. Users were generally unhappy with the whole installation process, as well as the integrity and speed of the subsequent service. Other households were still on landline copper from a variety of suppliers, and were getting 15-25Mbps and were also, in the main, dissatisfied with their service. Unthank's broadband was also provided by a Voneus (formerly LonsdaleNet) WAN using house-based wireless antennas, with broadband speeds ranging from 0.5 to 15Mbps, depending on the season and the weather! Residents here were also very unhappy, especially as they had been promised an extension of Gamblesby's FTTP service in 2018, which never materialised.

Brian Smythe from Kirkoswald, on B4RN's behalf, had contacted someone in Gamblesby who had helped with the original LonsdaleNet project, but he was unwilling to get involved after the problems previously encountered. Dave Henderson had been indirectly involved previously and, as he had some IT technical business background, he was approached to see if he would assist.

Dave got in touch with Stan Jenkins and in late April 2021, and standing at a safe distance in the farm yard (Covid restrictions were in place) Stan explained how the B4RN scheme would all work. Dave was impressed by the offering, but in light of his previous experiences, he checked out everything that he had been told, and quickly realised that B4RN was able to offer a service which his fellow villagers truly deserved.

Dave got straight into the detail, got Stan in front of the parish council to get their backing, started putting flyers out, posters up and going door to door to gauge interest and sell the service. Dave fielded all villagers' questions, and a well-attended village meeting was held in late August 2021 when Stan informed the audience of what was likely to happen over the coming months.

Following that, a B4RN update email was created and sent regularly to all the interested households. This was continued during the design and build phase until the project was fully completed, to keep everyone informed as to the progress and issues encountered. Having two villages to cover proved a problem, but Hugh Stewart, who lived in Unthank, took the Unthank support role on and Dave looked after Gamblesby, working together to keep every household fully informed and supported during the project.

On the 6th December 2021, a further public meeting was held for anyone in the catchment area who was willing to become a B4RN Volunteer. Again, a well-attended meeting was held with Dave and Stan

leading and explaining in more detail what would be required. 16 people signed up, and ultimately 13 became the volunteer group, the self-named B4RNacles.

After a number of informal chats and email exchanges and the creation of a WhatsApp Group, the inaugural meeting took place on 24th February. Among the many things discussed were the creation of a constitution, finances, election of officers and a huge amount of detail. The positions created were:-

Chairman - Hugh Stewart, Secretary - Dori Henderson

Treasurer - Stores and Consumables - Tom Sawyer

Operations (including wayleaves) - Dave Henderson

House Plan Coordinator - Mike Korner

House Plan Pro Forma Design - Chris Gibson

VoIP Decision Tree Document - Sean Moon and Arnold Fairless.



Trenching as an art form



Mike searches for underground services with the aid of his feet



First dig of the day and I am moving like a zombie





**That mole was proving very hard to catch**



**Lawn dancing – eat your heart out Strictly**

The rest of the Group were Greg Everatt, Dave Trickett, Chris Mulholland, Matt Malcomson and Paul Logan.

One huge benefit was that most of the group had project management experience. This proved invaluable, as over the next two months, weekly meetings and various onsite installation training from B4RN's team, cemented what was required and how it was going to be done.

The group agreed that households would claim their dig grants direct and would ask home owners for £50 to cover the group's installation work, leaving the remainder of the dig grant of £100 to cover the B4RN installation fee. However, it became clear this would be too large a pot of money to hold, as getting a bank account would take up to six months to obtain and this was not practical. The group's charge was then cut back to a £15 donation per household and, instead, a £200 loan was obtained from the Glassonby Parish Council. This, along with the group's individual £15 donations, constituted a pot of operating capital to purchase all the consumables.

In the following weeks, members visited all the properties that had signed up for B4RN and created a detailed plan for each. This included location of the router, locations of services, Toby Box and house kit locations, walls, garden layout and the number of P-clips, rawl plugs and screws required, as well as the agreed ducting route and any wayleave issues. These proved invaluable when the ducts and equipment were actually installed, and B4RN subsequently adopted these pro forma plans for other project groups to use.

The group had enough tools and equipment to cover all their needs, and only consumables like drill bits, cement, screws, P-clips and small items needed to be purchased. Dave Henderson offered a secure storage for all the equipment, and the first house duct was installed in early April 2022. Dig days were agreed to be Tuesdays and Saturdays every week to allow everyone to get involved, including those who were in full-time employment.





Dave preparing for holey orders in the Chapel



Team work in action –  
2 hours to dig a 8" x 2" trench



Mike selecting a suitable blue tag to fix to Dave



Dave kneels to the  
supreme deity of all  
trench diggers – the  
wheelbarrow





Dave quality controls all the biscuits



A watched box never installs



The devil is in the detail of the P clip fixing



The external B4RN box hides away in a tidy workshop.....



The home owner watches the first install with some concern





**Dave winding Arnold up  
about the 150 yards  
three duct pull**



**It might have been easier  
to fix it to the wall....**

Over the next three months the group installed all the ducts and house kits, often working in small teams and with most of the group working together on bigger jobs.

Some installs were short, where the house was right on the road side, some of the bigger jobs took the whole group. The largest was a three duct install over 150 metres and a second one that required a 40-metre concrete cut to be done, duct installed and re-concreted.

It was a general rule that, after each session, it was back to Dave and Dori's for a beer or tea and cake. This was a good time to relax, review the day and get to know each other a little better. After a few sessions the individual members created a tight knit and friendly bunch, one of the many plus points of the project.

As house kits started to be released by B4RN they were fitted to houses that already had ducts. As the project went on, dig days changed from just ducting to house kit and duct installing at the same time. By the end of June 2022, after only three months, 97% of properties were ducted and 91% had house kits installed.

From the start of whole project, Dave Henderson worked with Stan Jenkins to identify main feed duct routes through the two villages, and to secure some of the wayleaves required from the larger landowners close to the village for the main fibre feed.

As the project became more detailed and as more households became connected, because of his previous work with Stan, Dave took on the role of dealing with the house-specific wayleaves, talking to owners, planning and agreeing routes, drawing up maps and getting signatures.

Considering both villages are small and most

properties have road side curtilage, there were still 19 wayleaves required, as well as a key one to cover all the connections across Gamblesby village green, which was owned by the parish council.

Once the group's 7mm ducting work started, B4RN's contractors began to install the roadway and verge main 16mm ducts, and the separate runs to all the Toby Boxes, whose location had already been marked by the group. In early June sufficient 16mm ducting was installed to start blowing fibre, to install the main feed from Melmerby to Kirkoswald, and then once this was in place, to the individual properties.

Some of the group had a fun day being shown how to splice fibre, and were amazed at just how hard it was. Tom Sawyer got the prize for most successful splices achieved—two in four hours! Once fibre was being blown, B4RN started splicing, and in late-June the first properties were installed on the network. Some of the group also got involved installing routers, and this proved a great way of showing to the property owners just how fast the service was running, and that their speeds were in line with that promised by B4RN. It was a very satisfying time to see the whole process coming together.

Most properties were online by the end of August, with just a couple installed in early September.

During this latter stage some of the group were able to advise and assist householders with some issues with the new service. Sean and Arnold had already created a VoIP decision tree, and those who needed VoIP were supported in getting a service provision. There was also some work in getting a full wi-fi service in some of the older sandstone houses with very thick walls. Again the group were able to advise and suggest some solutions, most of which were taken up by the homeowners.

As a result of the work carried out by the group at the close of the project there were a total of 11 properties in Unthank and 60 in Gamblesby. A further 3 have subsequently gone live, giving an uptake of 74% including the community centre and the Methodist chapel.

Towards the end of August the group agreed that the work was close to completion and decided to formally disband. After receiving all the householder donations the loan was repaid to the parish council, and the remaining £300 left in the consumables fund was donated to the Gamblesby Community Centre. The last thing done before the group closed

down was to have a 'bring and share' supper at the end of October, which also included the members' partners, as a thank you for their understanding during the project.

The highlight of the evening was the B4RNacle award ceremony when the group members received thanks for all their efforts over the past months. The awards were a light-hearted way of recognising the







Dori Henderson - Digging Diva and Gardening Guru (2 Awards)

Mike Korner - Mapping Maestro

Sean Moon - Awesome Allrounder

Tom Sawyer - Mattock Master and Splicing Supremo (2 Awards)

Hugh Stewart - Professor of P-Clips

Dave Trickett - Gutter Gremlin

Especially during the last phase of the project installing routers and getting households live, Dave and other members of the group had occasion to contact the helpdesk at B4RN to resolve issues. At all times the helpdesk gave excellent support and resolved active issues quickly and effectively. The group has also been impressed since everything went live by the rapid response to any problems on the network, and the fact that they can ring the helpdesk and get issues resolved promptly.

After all the positives of the Gamblesby and Unthank project and the great satisfaction felt after it was all done, there was only one really sore point in the whole process. This eventually led to a significant change in the way B4RN dealt with things.

B4RN had already indicated their need to stop the dig grants and the group understood this and supported the reasons for this. But the manner in which it took place, and the impact on active B4RN projects already in build, had not been adequately considered, nor had any of the various groups been consulted. B4RN's unannounced blanket email notification price-change letter on 29th April 2022 caused enormous consternation within the group, and to other local groups as well, when they realised the effect on their individual projects and the impact on their group and individual credibility, given that the dig grants were integral in getting households to sign up at the start.

The May Bank Holiday weekend was crammed with emails, phone calls and face to face meetings as the

effort and enthusiasm that the members of the group had given to the project; to have completed it in such a short time was a truly astounding feat.

The 2022 Gamblesby and Unthank B4RNacle awards were as follows:

Arnold Fairless - Versatile Virtuoso

Chris Gibson - Drilling Demon

Dave Henderson - B4RN Botherer

groups tried to understand the extent of the impact on their projects and how issues arising could be raised with B4RN. It was decided that a meeting with B4RN management was urgently required. Due to the closeness of the May Bank Holiday, most leads were unavailable to attend, so it was Hugh, Dave and Chris Eakin, the Mungrisdale lead volunteer, who were able to meet the B4RN management team in Gamblesby Community Centre on the evening of 4th May 2022. B4RN sent Tom Rigg, Nick Hall, Martin May and Stan Jenkins. Unfortunately, Michael Lee (B4RN CEO) was in Covid isolation and could not attend.

The meeting lasted two and a half hours, and during a painful, and at times very tense discussion the various problems that would be faced by the local groups, should the immediate dig grant removal proceed, were detailed. For those who are familiar with any project work, an alteration in financing is a fundamental change and, therefore, requires a reworking of a project's scope. As each project was at a different stage in the build, each would have to be treated differently.

It took some time before the B4RN representatives realised that indeed that they had not considered these implications, and in the days that followed B4RN agreed to modify the dig grant removal process to accommodate this. It was agreed that all active projects would be completed under the existing dig grant regime, and only new projects would be subject to the new dig grant rules.

While the B4RN management team advised that they did carry out a risk assessment of what might happen when the price and amendment letter was issued, no-one spotted the above fundamental flaw, and no volunteer group or B4RN local champions were asked to review what they proposed. It was an unforgivable error.

While Dave, Hugh and Chris had the attention of the B4RN management team, they also outlined some changes for consideration to improve the wider operation, mainly associated with how volunteer groups are managed. B4RN said no other volunteer group had ever taken the time to provide them with any feedback of their operations.

So this was yet another first for the Gamblesby and Unthank Group—one of many! B4RN took these suggestions away to take a further look to see if they could be incorporated, but we have never had any feed-back.

As a result of the work carried out by the group, at the close of the project there were a total of 11 properties connected in Unthank, and 60 in Gamblesby. Subsequently, a further 3 have gone live, giving a take-up of 74% including the community centre and the Methodist chapel.

Kirkoswald, by Sue Quinn

Dave Ryall asked me for a suggestion for the siting of the cabinet. It was discussed at a parish council meeting and Neville Jackson, Kirkoswald born and bred, agreed to survey the area. On the day Dave came he was shown five possibilities. The pros and cons of each had been discussed with Johnnie Haugh,

another parish councillor with an in-depth knowledge of the area. Dave was amazed to be given so many choices with so much thought being given to the resulting effect on the whole project.

We had different people coordinating the volunteer activity in the areas within the parish. My area was Kirkoswald village. The first garden I was asked to give advice on during the dig came as a surprise. It was like confronting the north face of the Eiger and I was panicking as we climbed the different terraces. There were concrete areas, steps, drops of several feet and lots of trees. One of the helpers was John Holiday, father of the house owner of the house next door. He has had an allotment for years, and although he is over 80, he can dig for England. By the time we reached the top John and Bill had the beginnings of a plan to dig a trench to serve both houses and by the time we got back to the bottom, the plan was firmed up to include a third house. John was a great ambassador of the B4RN project despite the fact he did not have a computer and had never used one.

Just before the digs started, I had a major operation and was physically challenged. I went to the site of the first joint dig across several gardens and discussed the plan with some of the volunteers. A couple of days later I met with a few volunteers and watched as they began. Access at one point was a lot easier. It turned out a local had come with his chainsaw to trim a tree and some bushes to help, even though he did not want B4RN for himself. After a long day the volunteers had had enough but there was still some work to do. With all that was going on I forgot about it. Feeling a bit worried, I returned to see the area. It was all done. Hurrah, and thank you to the volunteers who had finished the job.

A big volunteer dig was through the garden of the Fethers pub (The Featherstone Arms). The pub is on the main street, which is a steep hill with rows of gardens with big walls and long drops between gardens. The Fethers was the key to access for several houses so there were lots of ducts to fit in a trench and several trenches going off the main one. There was a big wall to get through first. Then an overgrown area full of brambles and nettles. There was then a long run down the garden, then divisions leading to surface-mounted connections. Needless to say, it was a popular dig with lots of volunteers, and a finish in the pub later.

One lot of connections depended on a long dig across the vicarage garden. The vicar's husband did not want a connection, but the vicar was happy for us to come through the garden. After a long day leaving connections for seven houses, the volunteers came back to our house for a drink. This proved to be the first of quite a few jolly social occasions in the garden. Two couples had recently moved to the village and it was a great opportunity for them to meet some of their neighbours.

Another dig was across the garden of James, who had a bad back, but he kept us going with snacks and drinks.

Irene Sanderson, coordinator from Highbank Hill and project artist and photographer, came along as well as several other volunteers. All the photographs following are from her.

The ducts needed to go in several directions after a dig from the field across the garden through trees and hedges and thick walls. The dig volunteers ended in our garden with a few more alcoholic drinks.



Brian Smythe organised the project in Parkhead where he lives. This was a difficult area, and after a few visits from Stan Jenkins they had a plan.

Nearly all the residents agreed to pool their dig grants to achieve connections. They decided to pay contractors to do the work.

There was a hand-held mole plough across some gardens, some surface mounting and some hard digs.

It was a big job, but one resident, Wendy Smith, a parish councillor and a volunteer for the project, was very pleased with their connection. She and her husband download television programmes to watch later. The old connection was so bad it was only possible to download one a day. The first download with B4RN took seconds.



Stan and Flick explaining the plan to Brian and his team of contractors in the barn.





Graham with the Ditch Witch.



Nadine Dorries meets the B4RN team. Stan, Tom and Nick.



B4RN volunteer Johnny Haugh had to work in small spaces to get the boxes fitted on one property.



#TeamB4RN engineers Pete Henderson and Lucy Hawkins.

## Kirkoswald build

A mixture of volunteer soft dig, and B4RN civils team for the hard dig, they took a duct up to every property boundary. In parallel with the installation of the infrastructure, the volunteers were coordinating the installation of the house kits and the final link from the boundary of the property to the properties. In some cases the volunteers performed this work or the residents used local contractors such as Dave Rogerson from Levens and Will Dehany from Middleton. Frank Brown from Cantstfield and Barry Cheeseman from Heversham came to blow the fibre. Trained contractors have become the new normal these days, and it takes the pressure off the local volunteers and frees them for other jobs on the project.

Irene Sanderson, a local artist, started to photograph and draw what she saw in her role as a coordinator. Her work is copyrighted, but examples are shown with her permission. Her work also caught the attention of both Nadine Dorries and Neil Hudson who were very impressed with the quality of Irene's work. Nadine Dorries was the Secretary of State for DCMS, which was responsible for BDUK, and Neil Hudson is the MP for Penrith and the Borders.

#TeamB4RN engineer Pete was spotted buzzing about connecting a customer under a bees' nest in Renwick and Kirkoswald. The suit is thanks to local beekeeper Peter Morgan.

Once the ducting installation was completed, B4RN installed the control cabinets and blew the fibre through the network. The fusers came and joined all the fibres together.

The final phase of the project was the installation of the B4RN routers by volunteers and the go-live of service which occurred between May 2022 and early 2023.



Sue Quinn and her MBE spade award.



Brian Smythe and his MBE spade award.

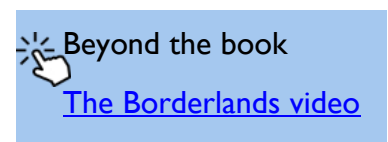
The last phase of the project also included the collection of the dig grants from residents who had used volunteers to do their work and refund the money to a community fund. This community fund is being used to procure for the parish three additional defibrillators in Staffield, High Bankhill and Parkhead, thus giving access to a defibrillator to most properties in the parish. We are also installing additional bench seats, contributing to repairs in the community shop, and making a significant contribution to repairs and renovation work for All Saints Church, Renwick.

The current count of B4RN connections in Kirkoswald Parish is 266 domestic and business properties out of a total of 466. Free connections for community buildings include two churches, Kirkoswald Village Hall and Kirkoswald Primary School.

Brian Smythe has the gratitude of the parish council and the people of the parish. He received a certificate from the Lord High Sheriff recognising his efforts for the community.

Brian and Sue were awarded Member of the B4RN Empire (MBE) spades for all their work on the project. They were also featured in the Borderlands promotional video. Borderlands Inclusive Growth Deal - the first two years.

46 kilometres of trench was dug for the Kirkoswald project.







First meeting of volunteers took place on the 23rd October 2020.



Jorj demonstrates how to dig a course neatly.



How to dig through farmland.



How to dig through a garden.

## The Art Of Achieving Hyperfast Broadband

by Irene Sanderson

Two measly Megabits per second; one Word document of a patent of 10 pages of 5000 words may be represented in as little as 27kb, but one image file if prepared ready for printing on an A5 flyer, may need as many as 10 megabytes. My image files kept bouncing back to me as too large for the email postbag. And on the telly at weekend peak viewing, the main picture was of the spinning spiral of internet exhaustion for our hamlet of High Bank Hill.

Month after month, parish council reports on the efforts of Brian Smythe and the parish council on the trail of broadband improvement brought nothing but disappointment. For years they listed investigations, siftings and applications for all the latest schemes.

When the cabinet for BT FTTC fibre arrived in our main village, Kirkoswald, just one mile away, the superfast broadband fell short of us. The sunken conduit for extending the BT cabling is threaded under the verge past our house, but gracing it with fibre was not deemed financially viable; the lids of the inspection pits rotted through and thistles grew up tall in the manholes.



Jorj Haston from B4RN showing the hinging method with turf.



27 October 2021 Renwick: First sod cut by volunteer.



First garden trench.



First house kit box fitted



1<sup>st</sup> of November 2021 saw the arrival of the contractors for mole-ploughing.

In early 2020, Brian Smythe and the parish council found news of B4RN. It was a new dawn. We applied for the voucher to pay for the connection to hyperfast fibre broadband. At the beginning of October there was a meeting for the whole parish to view the plans that B4RN had drawn up. Satellite images of the parish and map version were threaded with coded routes for cables, outlined like arteries for the chunky pipes, splitting into slender lines marked with squares for chambers and into the final individual threads, ending in little cyan dots for connections.

Each household would be connected to the B4RN network by one glass filament no wider than a human hair, along which information would flicker at hundreds of megabits per second. The future was lit up! And immediately, along with Stuart who lives around the corner and whom I had never met before, I signed up as a volunteer. We were desperate for liberation into the wider world and were eager to find out what would be required. However, for 28 years working in my studio at home, out and about all over the place to study and paint, I had little idea of the people living in my community. And now I had to rely on their goodwill and cooperation to get what I wanted.

The volunteers were to work together with each household to find where the fibre could function best in the home, and then dig the trench, get the ducting in place up to the house, and get the kit ready to take into the house.

The fibre is tough, but brittle and dangerous if handled with its sheath exposed. If wound too tight then the light signal is impeded by the bend. Directing it around obstacles, and along the walls, and along the trenches dug through the gardens, and finally through the walls and connecting to the router inside, was a skill. Some work was needed to get the households to complete these preparations as the contractors set to work, up fields and down





Rob Robson and his mighty mole plough and main workforce.



Flick from B4RN came to explain things.



Flick at the meeting in a B4RN.



Determining the course of the ducting.

dales, ploughing in the main trunk duct housing the bundle of fibres.

Twenty three of the 30 households of High Bank Hill signed up. The remaining seven households could not make use of the opportunity, but they too were kept in loop and provided with a connection for the future.

To get our fibre, Stuart and I had to complete the paperwork and then complete the practicalities for the ducting of the fibre from the main trunk into our homes.

We were advised in turn by Brian Smythe and Sue Quinn of the parish council and by Stan Jenkins of B4RN.

I also took on the role of self-appointed artist in residence recording with camera and sketchbook our parish at this change. These photographs and illustrations are a graphic reminder of how the community came together to achieve a long-held dream.

Here are a few of my images...



The following pages are a photo diary of the installations. We have never had such a well-documented project before, and thank Irene for her permission to use them in the book.





Flick explaining what needs doing.



The volunteers and Flick.



Tea break.



Ready to roll.



Ready to unroll.



Jorj keeping an eye on everything.



Unrolling the duct.





On 15<sup>th</sup> December 2021 we moled under the road to Renwick Mill.



The 15<sup>th</sup> December 2021 job at Renwick Mill also involved hand-digging.



By 1<sup>st</sup> December 2022: we were cutting across the B6413.





On 6th January 2022 we were ploughing in the ducting down from High Bank Hill to the Raven Beck



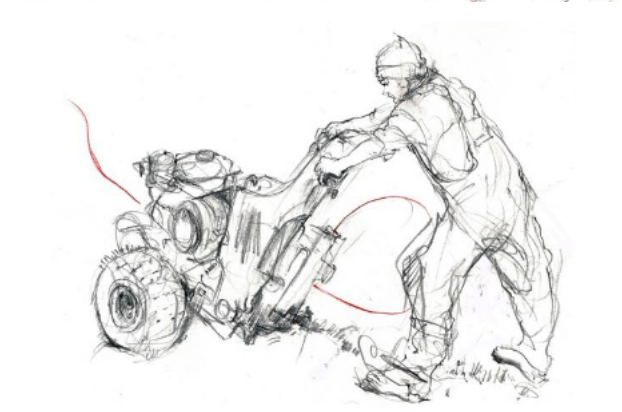




Lunch at the Raven Beck.



We celebrated Harry's 21<sup>st</sup> birthday on 10<sup>th</sup> January 2022.



On the 15<sup>th</sup> January 2022 we saw Graham using the Ditch Witch plough through the orchard at Chapel House.





Barry, Frank and Flick arrive to blow house fibre with Stan.



Barry using the nano to blow the fibre to Flick.



The 18<sup>th</sup> of January 2022 saw Flick catching fibre, and inspection of fitted house kits prior to blow from Barry.



Howard Quinn, who looked after the rolls of ducting, let us collect some on the 19<sup>th</sup> of January 2022..



Duct store.







On the 23<sup>rd</sup> of January 2022 we were trained how to introduce the fibre into the house.



Dave Rogerson from Levens showed how to thread the fibre through.



Dave mid way through fitting a house kit.



Volunteers fitting house kit.



Dave demonstrating how to fit external house kit box.



Dave with his long drill.



First house kit fitted.



On the 2<sup>nd</sup> of March 2022 we entered Kirkoswald.





31 March 2022.



Winter was still with us on the 31<sup>st</sup> March.



The cabinet has arrived in Kirkoswald.



Looking at the terrain with Nadine Dorries and Dr Neil Hudson MP.



Putting places to maps.



Talking to the contractors and volunteers.



Nadine Dorries holds a fibre, watched by Dr Neil Hudson MP.





Secretary of state Nadine Dorries with Dr Neil Hudson MP inspect the mole-ploughing.



Overlooking the Eden Valley.



The marked spot for the house duct to enter the property.



The plough in action.



Branching off the core with a house duct.



And moving on with the main core.



The 4<sup>th</sup> of April 2022 found us heading for Renwick and the fellside.



By the 9<sup>th</sup> of April 2022 we were at Berrymoor.

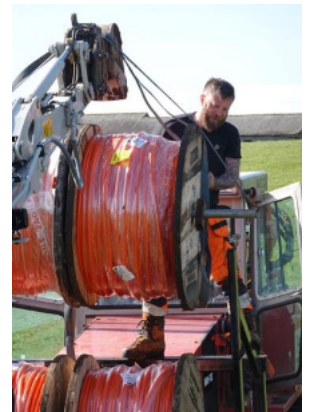




Stuart was delighted by his connection after hours of digging his trench.



Onwards and upwards to Renwick and the fellside.







Hard house dig..



Easy house dig..



13 May 2022..



13 May 2022..



17 May 2022 James Clapham and Rob Staveley fusing.



13 May 2022.



17 May 2022.



Rob Staveley fusing a bullet.





27 May 2022: Entering Kirkoswald.



7 June 2022: Back Street, Kirkoswald.







Renwick 24<sup>th</sup> June.







21 June 2022: Gamblesby.



21 June 2022: Gamblesby.



21 June 2022: Melmerby the neighbouring parish going live first.



Renwick 24<sup>th</sup> June.





New toys arrive.



It is down here somewhere!



Off loaded multi-reeler.



Just missed the traffic jam.



23 June 2022: On the way to Renwick.



The B4RN blowers with Frank.







Blowing core duct.



Fleeting core duct.



24 June 2022: The arrival of the routers.



29 June 2022: Renwick.



, Barry and Dave blowing house fibres at Brookside. On the 11th July 2022:



The cabinet is live.





Working on the cabinet chamber.



The cabinet.



July 2022. Fusing at Potter Bank.



July 2022: Connecting fibre at High Bank Hill.



Fusing the fibre at a house.



July 2022: Pete from B4RN connecting fibre for house kits.



Elaine from B4RN installing routers.



## Essential movers



Sue Quinn



Bill King and Howard Quinn.



Bill King



Ruth Anderson, Howard and Kate Hobbs, and Nick Anderson



Sue Quinn and Ruth Anderson.



Nick Anderson



Cindy and Jim..



Brian checking maps.





## Stan Jenkins' story

Stan had been a volunteer on the Chipping project when he lived there with his wife Fiona, who was the vicar. He had bought a house in Lazonby a few years previously to prepare for retirement, and he knew the difference between the two connections. He really wanted B4RN in Lazonby! Once they moved in, he contacted the local parish council who told him to talk to Brian Smythe in Kirkoswald.

At that time Brian was checking out all the supplier options for the area as they had the choice of BT FTTC, Voneus and B4RN. Brian had been a project manager and he was very methodical and organised, and after much work and meetings they decided to go with B4RN.

Because Stan had been involved with B4RN, he attended meetings and they offered him the job of community engagement and development officer (CEDO), which is to help communities engage and develop their projects. Covid had hit, and his normal job was on hold as it involved travel, so he took the job. This was in March 2021, a few months before their move to Lazonby.

The breakout point for the connection would be in Melmerby, where B4RN already had a link to the ZAYO fibre. Then it would go to Gamblesby, and on to Kirkoswald. Stan had helped plan the routes in Chipping, so he helped out with all these routes and wayleaves, and found a site for the cabinet and a champion in Dave Henderson for Gamblesby, and the villagers joined in. Gamblesby had already got fibre into some homes from Voneus, but it was fed with a single wireless feed that was not very fast or reliable, so they all signed up to B4RN.

Route 1 to Kirkoswald was completed very quickly and efficiently, thanks to the work of the volunteers, and all the gardens were dug, and house kits fitted. Peter Morgan, a local contractor approved by B4RN, did a lot of them in Kirkoswald, helped by Will Dehany and Dave Rogerson.

Vouchers, as mentioned before, went into a community pot in Kirkoswald. The parish council were the receivers of the money and paid out for drills and drill bits etc. In Gamblesby they did not want a pot, so they turned down the dig grants and asked home owners for a £15 donation to cover their materials costs and the volunteers did the work for free. This kept down the amount of money needed to build the project and was a bit more like 'the old days' when B4RN was starting up—true community spirit.

Stan says the main reasons he enjoys his work is the people, the different characters he meets and works with, and the pleasure of getting the job done with their help.

Stan still has not managed to get his connection in Lazonby. This is due to funding not being available and a lot of confusion over whether BT or Voneus or Fibrus are going to win the procurement. This is a constant battle for all the rural villages. If everyone in the village signed up for B4RN they could apply for vouchers, but one cannot expect people to sign up if they are being told another operator is due to start work in the area.



Nor can one expect people to buy shares in B4RN for the same reason.

Sue has six holiday cottages in Kirkoswald, and with sub-megabit internet she found she was losing business because families with teenagers would not come, as the kids could not do their schoolwork or stream videos or keep in touch with friends. Mobiles do not work unless you walk right down the lane, and the BT phone line crackles and keeps going off. Getting B4RN has meant they can do absolutely anything now, wifi calling means the mobiles work and Sue's newspaper comes in instantly instead of taking half an hour to load. She can administer the business, do DEFRA submissions, online banking and shopping, and she says it was well worth making the effort to get the connection to her property. Strangely enough they used to live in the first house in the country to get rural fibre in 2009! It came in after they left it, but it does seem like it is a small world. Their house is in the rural fibre video in the blue link box.

The Connecting Cumbria project was a great success in Kirkoswald, as you can read in a case study from Sue and Richard Bottom via a link in the blue box.



Beyond the book

[Sue and Richard](#)

[2009 rural fibre video](#)

## A Coordinator's Story

By Kevin Tea

I first used the internet back in the early 1990s when all access was through typed in string commands, very different from what we have today.

In 1995 I joined a four year European Commission project looking at how the emerging technologies could benefit the geographically disadvantaged—Eurospeak for those stuck in the back of beyond. Fast forward a couple of decades and B4RN and a pandemic made working from home, from Kirkoswald, a reality!

As the possibility of a gigabit connection through B4RN became a reality, a series of volunteer roles were identified. As my DIY skills were on a par with Stalin's record on human rights, I volunteered to be the coordinator for my immediate neighbourhood of around 30 houses.

My first task was to leaflet all the households with information on how the rollout would happen. Further flyers were distributed as new stages were reached.

I liaised with the team in the field, literally, and with those digging up roads and pavements for trenches to lay fibre.

It was not a difficult or challenging role, but at get togethers of the neighbourhood coordinators we shared experiences, problems and solutions, all of us binding over one aim—getting ultra fast broadband throughout the village.





Village meeting.



The Great Salkeld team. Carol Beveridge, Janet Bowden, Nigel Patrick, and Donna Webster.

## Great Salkeld

Great Salkeld is a small village and civil parish in the Eden District of Cumbria, England, a few miles to the north east of Penrith and bordering the River Eden.

### Donna's story

Donna Webster says her work had dried up during Covid, when Nigel Patrick approached her and said, 'I could work with you, can you help?'

They had all talked to Brian and attended meetings, and Nigel understood the difficulties, but then when lockdown happened everything changed. It was all very slow to start with; the world and B4RN had to readjust how things would happen, and they could not hold open events or go door knocking to raise interest and funding. They got a Facebook group running and pushed leaflets through doors. Jenny joined her, and, as she had a farming background, she knew a lot of people and could reassure them that B4RN would be different. A previous alternative network had not been successful in the area, and people were very sceptical about another one.

The outskirts of the village, where there was no decent service at all, were very supportive, and it was like 'pushing on an open door with those people' she says. They were happy to give wayleaves and to help in any way. In order to start the project they first had to get sign-ups, and then raise the funding in shares to bridge the gap between the vouchers and the cost of the build. A very helpful person in the village told them about the top-up scheme run by the council which would match the funding up to the cap put up by BDUK, thus meaning the first half of the vouchers would be double the value, and this meant the money would come in larger amounts when people came live. The amount of funding did not alter, it just came in on the first customers, which helped with follow-on customers.

At this point, Donna remembers there was massive confusion over it all, not helped by Covid and people in government departments working from home, possibly with bad connections. It was really frustrating trying to get answers. The problem with registering and a hold-up with delivery meant vouchers expired, and so were lost to the project. All this took a lot of organising and it was stressful.

Once the Covid restrictions started to lift they swung into action. Stan Jenkins was brilliant, and they held several meetings in the village hall or pub, and he could answer any question thrown at him in his quiet calm



way. There was no need to hard sell, as B4RN sells itself. Slowly, the villagers came to believe what they were saying. This is a prime example of the FOUR As in action. At each meeting the people signed up, and when they had over 50% of the homes signed up, B4RN could get on with the planning.

This project did not have a large management team, basically there was just Nigel, Donna and Jenny, the first



Donna, Nigel and Jenny.

As. They did however have many second As, the Adopters. Because of them, and the reputation B4RN already had, and the fact that they had Stan and Helen and Flick from the mothership, between them they won over the Apathetics. As has been mentioned previously, apathetic is not a very nice word, but it covers a multitude of reasons why some people were not interested until it was explained properly to them. This project did exactly that, and the majority became Adopters.



Tony Middleton on the mole plough.

Because they were a team of three, they could make decisions very quickly. The parish council were supportive, and they reported back to them regularly, but did not have to wait for them to decide on anything. This speeded things up, and soon Flick and Helen were there and they walked the routes, changed some of them to suit conditions and landowners, and avoided the few bits where there were issues. Every project has its fourth A, the Anti people, who either demand payment for wayleave, which is impossible with the B4RN model, or those who think the internet is the work of the devil, or those who think people are doing it for what they can get out of it.

With hindsight, Donna thinks at least one of the Antis could have been brought round by someone else approaching them, maybe B4RN could have won them over—but it is what it is. Other parishes have had the same issue, and you cannot win them all. One Anti was particularly galling to her, as to reach a family, they had to do a road crossing, which increased the costs by £5000. Most of the area is owned by three large estates, and she says it was an absolute joy and a privilege to be allowed to walk the routes with the landowners and to note down where they wanted the route to go; she really enjoyed that part. They finally managed to collect enough money to start, and then it all went frantic.

Tony Middleton was the main contractor and he brought the duct up to every property.

As time went on, B4RN really ‘sold itself’. She and Jenny still did door knocking in the village centre and chased up holiday home owners, of which there are a large proportion in the area. There was an army of Adopters by now, and they volunteered to do all the garden digs and installs. The dig grants were to go into a community pot. B4RN contractors were also used to do this work, but Donna did the house assessments first to be sure the install was done where the customer wanted it.

When things went wrong Flick was always there at the end of a phone or an email to get it sorted out. The



Nigel patches in their 100th customer with Tom Rigg, COO at B4RN.

expiry dates on the vouchers were making her feel things were out of control, and she did not know whether she was a mother hen or a headless chicken some days.

The pressure on organisers was even greater in this area, due to previous altnet provision and the lack of a service from BT, and they did not want to let their community down, or neighbours to think badly of them, she adds—quite understandably.

B4RN by this time had brought in Connect+. This meant people still in contract with another supplier could have B4RN as well for £5 a month if the contract had less than 12 months to go. This

helped to get more of the installs done at the same time, as it is always harder to go back later to do them, and the vouchers would have been lost. They also had to explain to the third As that they could still pay for Sky or BT Sport even if they were not their internet customers. Donna says she learned a lot! She also met everyone and made lots of new friends.

Great Salkeld is a conservation village, and everyone there is now well aware of the low impact that bringing world class connectivity can have if done properly. A few people said later they did not sign up at first because they did not want to see loads of poles and wires in the village. All B4RN’s infrastructure is underground, but they did not realise this. They do now. More people have now asked to join the network, because, as has been said before, it sells itself.

Once the fibre was blown and fused, Jenny helped the B4RN connections team putting routers on, and Donna



helped them set up their devices and check the wifi signal in the old houses. She advised them on mesh wifi boosters, showed them how speed tests can vary, and helped them with alternative landline choices.

She preempted a lot of problems by publishing her own speed tests on the Facebook page to show the vagaries of testing. Donna says that, when she agreed to help Nigel, at first she just thought it would be a few leaflet drops and that B4RN would do everything else. She had not realised that a couple of years of hard labour would be required. But she does not regret it, 'It fits in with my value base,' she says.

Because of Covid, and because BDUK kept changing their minds about vouchers, it made it all harder. The fact that B4RN had all this to cope with too, meant that they were not as organised as they could have been. But as she says, 'Who else would help us'? And they are all so grateful they could work with B4RN and help themselves.

She says her children who live in Sussex are very jealous of her connection.

Donna's advice to B4RN to make things easier for future projects, is a handout showing the different stages in order, subject to government changes. This could speed up the process if people knew up front what was going to be involved and can follow a working template.

After the project was finished they had earned a surplus of dig grants. As customers came live and the voucher money was paid to B4RN, the dig grant was paid into a special fund they had set up for their charity at a local bank. The volunteers who earned it, and the village, decide together where they will spend it. Currently they have had many good ideas, ranging from a generator to keep the hall warm as a 'safe space' during power cuts, safety measures on the main road which is a long straight 'rat run' and solar powered street lights. The village will decide which is of the most benefit to the majority.

Great Salkeld dug 23 kilometres of trench.

Eventually it was to planned to carry on down the Eden Valley to join on to existing infrastructure, but the funding for the southern routes was taken by procurement so the projects stalled, but could probably happen one day as major telecoms providers avoid the rural areas; (as seen in the previous Cheshire chapter).



The Great Salkeld celebration with the supporters.

## Mungrisdale



Mungrisdale village hall.

a connected parish to join on to it, nor were they near a breakout point on the Zayo fibre which feeds the other parishes from B4RN's main feed.

Chris Eakin, who is one of the locals and who quickly concluded BT had no serious interest in Mungrisdale, decided to jump in and persuade B4RN that the parish was worth coming to, despite the obstacles.

Little did he realise it would take over the next two years of his life. He contacted B4RN who said 'No', again. Undeterred he carried on until someone listened to him. He told B4RN there were 150 homes and almost all of them relied on mobile broadband for their internet, and many businesses in the area too. Vouchers could



The Mungrisdale team.

Farmers in Mungrisdale had been lobbying for 20 years to get BT to provide them with decent internet. The hamlet and surrounding area is served by four different telephone exchanges, all outside the parish. Everyone had a dismal service on long copper lines often travelling for miles over the Lake District fells. Each quadrant of the parish had to do its own application to BT, and all were put off with either delays or eye-watering estimates, and no promise of trying to get to everyone in the parish. A community group was formed. They rang B4RN, who said they were not working in the area. Unlike the previous villages, Mungrisdale was nowhere near

be obtained, and, crucially, upfront, he guaranteed pledges of £150,000 of investment to bridge any gap. This was being promised in private conversations with Chris, from a few individuals, who were desperate for a decent connection. In some cases it was because they worked from home.

He gathered around 20 volunteers to join him and B4RN arranged a training session in his garden, and a few also attended the training workshops at Melling.

They went round door knocking to see how many residents wanted the service, as that would determine whether B4RN would take them on—or not. Also in the decision was the voucher and top-up money. The top-up-pot is the fund that a couple of forward thinking councils (Cumbria and Northumberland) have made available, so double the voucher money is claimed up to the cap. This literally means the first 50% of houses get it, and then the money the parish has raised is claimed back when the houses go live and the vouchers are paid out, thus making the money available again to complete the project. But the pot was nearly empty and also delaying them at this time was a lot of rule changes by the government about the vouchers



themselves. It all meant that B4RN could not start a project until they knew what was going on.

The next issue was Covid. That meant all their meetings were online, and with sub-megabit broadband it was a real struggle. Even using mobile data became really unstable because everyone was using up its limited capability.

By the time a year had gone by, Chris was wondering why he had ever started. He felt he could not just walk away, as he had got the people to invest and told everyone it was going to happen, but outside factors beyond his control kept messing things up.



Robson Contractors.



A map of field drains.



The badger sett.

Eventually, things came together and the project was approved. Robson Contractors were to do the digging. The problem then was that nobody could tell Chris precisely when they were coming. When they eventually came to Mungrisdale they could not start work because the farmers were harvesting the grass. Nevertheless, they finally got going and Chris says they were absolutely brilliant.

Chris and some of the group had got wayleaves and finalised the routes ready for them, but the contractors understood farmers, and fine-tuned some of the routes to avoid drains or problem areas. Mungrisdale has more than its fair share of rain and so field drains are prolific. Drains are one of the main reasons a farmer does not want anyone digging in his fields! Some farms are well-documented, but usually farmers rely on memory as to where their drains are. Often it is a case of ‘Ring Grandad’ but here they knew where they were.

Field drains are usually about 3 feet deep, as that is the optimum for good drainage. The B4RN duct is about 2 feet deep, so theoretically they exist together



High fives.



Minus 13 degrees, as Dave drives up the M6 to carry on working.



One of the remote houses.



Frank Brown and Barry Cheeseman fixing a blockage.

happily. The problems come when either drains go shallow over a dip, or erosion has worn land away.

But one crisis took everyone by surprise. A well-known area of badger setts expanded unexpectedly and suddenly a length of conduit and fibre was running right across the top of a new badger tunnel. Over the coming days, B4RN staff had to endure jokes about badgers and their wifi connections while sorting the issue out. Chris says B4RN dealt with this with remarkable efficiency. With cooperation from the farmer, they changed the route and Robsons moled right round the opposite side of the field again to avoid them.

There were high fives all round heading back over to start Route 1 at Mungrisdale Near Keswick.

B4RN then changed the rules about dig grants. This was explained in a previous story, but Chris also met the B4RN management to make it clear to them how it had affected the credibility of the organisation in his community. He had promised everyone they would get it and it was now all his fault they would not. Luckily they won the battle and the community got the grants. This was a lesson learned for B4RN, but, again, another very stressful and time-wasting matter for the project to deal with.

Tim Farron, a Cumbrian MP, campaigned on their behalf, because at one time it looked like they would not get any vouchers as BDUK and B4RN seemed to be in chaos.

Some of the villagers dug their own gardens to get the duct through, but the majority was done by B4RN contractors. Dave Rogerson from Levens was a constant visitor, shooting up the motorway to fix the house kits on the wall. It was -13°C one day when he was heading up there.

Eventually the job got done, and Frank and Barry came to blow the fibre and deal with blockages.





Tea and mince pies for the fusers.



Fusing the bullets in the field chambers.



Fusing the chamber bullet to bring everything live.



Sharp Edge on Blencathra. Photo by *Chris Eakin*.



Sharp Edge on Blencathra. Photo by *Chris Eakin*.



Swineside in Mungrisdale. Photo by *Chris Eakin*.

B4RN sent in the fusers to work their magic and Matt, one of the house fusers, got tea and mince pies.

The cabinet was installed at the village hall and the project was live.

This project did not use any volunteer labour during the blowing and fusing phases; B4RN had taken all this off the volunteers' shoulders as they morphed into a professional telecoms company.

The village hall hosted the cabinet and got a free service, for which they are very grateful, having only had half a meg before. They can run their classes much easier now, wifi calling works and everyone is very pleased with the quality.

The Quaker meeting house also has a free service, and they think it is wonderful. So do their guests. They run a coffee shop/cafe for the fell walkers and the money raised goes to a charity—the Northern Fells—which raises money for vulnerable people.



The Mill Inn pub loves it, as do their guests, and more stay there now as it has a decent internet connection.

The parish boundary is Sharp Edge on Blencathra, an infamous mountain rescue spot, and they get lots of walkers.

They had a party; the official switch on for B4RN in Mungrisdale involved a local farmer's turnip cutter! More than 70 people, including local volunteers, were at the event at the village hall



Chris Eakin and his MBE spade award.

Chris was awarded the MBE spade for his remarkable staying power and helping his community get its Gig.

Mungrisdale dug 60 kilometres of duct in their project and had about 90% take up in their central patch.

It took two years from start to finish, with the bulk of the actual build being done within 6 months.



The village party.



When they went live Blencathra was featured in the publicity.



Farmer's daughter Kristina Fell made the local papers flying the flag on Mungrisdale's parish boundary - Blencathra's Sharp Edge.



# CHUFFED TO GIGABITS WITH VILLAGE'S NEW BROADBAND

Decade-long battle to end community's digital deprivation is finally over

MUNGRISDALE in the Northern Fells is going from being one of the most digitally deprived parishes in the country to one of the best served.

Full gigabit fibre broadband has gone live at Mungrisdale Village Hall. It is a key moment in more than a decade's battle to end the broadband isolation of this forgotten corner of the Lake District.

Half of the parish is open fell with the boundary running dramatically along Blencathra's Sharp Edge. Neighbouring areas have commonly had fibre cabinets in the villages for years while Mungrisdale has been left to struggle on with yesterday's copper wires running for miles and miles from four telephone exchanges all which are outside the parish.

For two years, volunteers led by former BBC News Channel presenter Chris Eakin, have been working closely with B4RN, Broadband for the Rural North, based in Lancashire, to bring fibre not only to the parish but directly to each of 150 properties – so called fibre to the premises.

B4RN is active in parts of the Eden valley but its network is 15 miles from Mungrisdale so locals pledged a minimum of £200,000 investment to ease the burden of the extra cost of bridging the gap from Penrith.

As a not-for-profit, community organisation, B4RN lay their fibre across farmland without paying the landowners. In Mungrisdale, almost all of the 50 landowners agreed to sign a wayleave. It is a



**MAKING THE CONNECTION:** Farmer Robert Jackson bursts a balloon in a turnip cutter to fire a blast of air down a conduit and switch on the fibre broadband.



**CONNECTED:** Resident Kristina Fell flying the flag for Broadband for the Rural North on Sharp Edge.

*"Yesterday we had about half a megabit dribbling in on the old phone line. Today, it is 960 megabits"*

**MIKE SUTTON**

thing," he said. "And I might even use online auctions. I haven't dared before now because they keep buffering."

On the day of the official switch-on, village hall trustee and B4RN volunteer Mike Sutton said: "Yesterday we had about half a megabit dribbling in on the old phone line. Today, it is 960 megabits. I can't believe Mungrisdale has gone from bottom to top of the pile!"

The first 35 houses have gone live this week and the whole project should be finished within a few months.

process run entirely by the volunteers.

"It simply could not happen without the goodwill of the landowners, who are mostly farmers," said Chris Eakin.

"This feels like a once in a lifetime opportunity for Mungrisdale. Most people understand that broadband is the latest vital utility. Yet, without B4RN, there was a real danger we would be

expected to muddle on with mobile or satellite broadband and all their weaknesses and expense. That risks exacerbating the digital divide.

"A B4RN project is about self-help. We have had 20 volunteers on this. It absorbs colossal time and energy but without that commitment you get left behind. Now, our parish has a couple of off-grid houses with no mains

electricity but full gigabit fibre broadband. It is incredible."

Dairy farmer Steven Hunter, in Berrier, is looking forward to getting maximum benefit from a quarter-of-a-million pounds investment on three robotic milk and feed machines. They look after 160 Friesians, and the remote monitoring will now be more reliable with fast internet.

"This is quite some-