

Chapter 5

Dentdale and Garsdale

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Dent

About this time (2015), a northern altnet got into difficulties. Fibre GarDen, the project to bring the internet to two very long valleys consisting of Garsdale and Dentdale had fallen foul of the politics of the day. B4RN had been offered the same deal from the government, i.e. we raise half the money needed and the government would fund the rest. B4RN had turned it down because it meant going out to tender for the construction. As nobody at the time had tried to work in fields using their own duct and fibre, it meant no company knew how

to do it, and it was not in our business plan at that time to use contractors.



Picture in the village hall.



The road through the valley, very sparse population.



Gawthrop and its Lindsey spade on the signpost.

In 2012, Fibre GarDen had put in their plan and raised the money. The company entrusted with the job used up all the money raised from the community, but could not bring the project live. This meant that Fibre GarDen could not pull down the funding to complete the project. Nor could they pay their digging contractors or pay back the shareholders.

Two of the directors were determined to get the money back, and the dispute went into arbitration. They later did get 85% of the money back as Fibre GarDen were not at fault.

The people who had won the tender asked B4RN to help out. B4RN, despite being very busy in the Phase 1 build and besieged on all sides by other villages, agreed to help.

The first stage was Gawthrop and then into the village centre. Gawthrop got the Lindsey spade.

David Pilgrim was the original Activist, and what follows is an account from one of the key people from Gawthrop, which was the first part of Dent to be connected.

John Sibley worked tirelessly to help his community, and recruited more Adopters to help.



Adrian Gordon and Ray Newport.



John Feltham with the picnic basket.



Anthony Fisher.

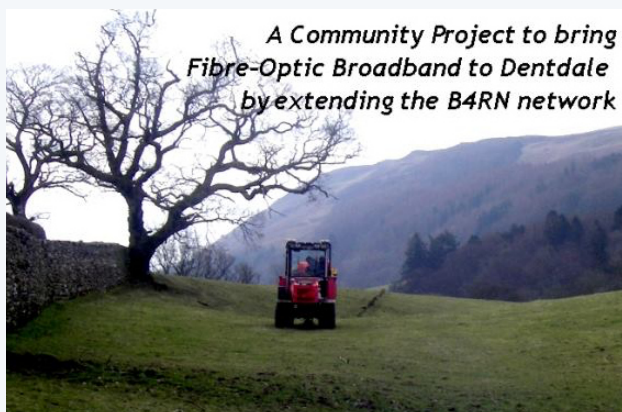
John Sibley's story

David Pilgrim got the whole thing started, and it was David who raised the funding and selected a team of people to deliver the project's intentions. Ray Newport was not known to David Pilgrim but when Ray saw that things were not going right, he just stepped in and got his hands dirty. David Pilgrim did a huge amount of work behind the scenes, but Ray took on the lion's share of the building work.

I was originally recruited by David Pilgrim as 'supplies manager'. It would be my job to ensure that materials were in the right place at the right time for use by the section leaders. Soon I was to become a project quantity surveyor. I then took on David's role as a digger, but by then we had Tony Middleton on board with his home-adapted mole plough and enough enthusiasm to conquer the world. He took to the job like a duck to water, so all I had to do was to point Tony in the right direction and say go.

Two of the people that David Pilgrim recruited were Antony Fisher, a retired consultant anaesthetist from Kings College hospital in London, and John Feltham, a retired indirect tax adviser, pictured above bringing the afternoon tea to a dig. These are not the sort of people who would first come to mind to work with that special breed called a 'dales farmer' and get mucky in the process. Those impressions were soon expelled when we saw them in action. They both developed very good relations with the farmers in both the acquisition of wayleaves and in cooperation when digging the really difficult sections where the route was in steep rocky ground. In any account of B4RN in Dentdale, these two men deserve a mention.

This may seem a minor point now, but there is an issue which almost saw the Dentdale project failing before it started. It was the matter of how the farmer-diggers were paid. Before we had got the first spade into the ground, it became clear to me that the B4RN 'Shares for Digging' payment procedure would never be accepted by even the most naive and trusting farmer, let alone a 'dales farmer'. The B4RN procedure, for tax reasons that applied at the time, was for the farmer to undertake the work and then, (this was the sticking point) send a cheque to B4RN for the amount he had earned for digging. B4RN would then credit his account with the same amount, thus demonstrating to HMRC that the farmer had paid money for shares. Barry, the then CEO was understandably, concerned that if B4RN initially sent money, the farmer would prefer to take the cash rather than the shares. Given the failure of the Fibre GarDen project, one could see the farmers' point, too. I too thought the plan could fail due to the farmers' lack of trust in B4RN. It didn't help that, in the minds of the potential farmer-diggers (who we also relied upon for most of the wayleaves) that B4RN staff too,



The terrain.

shares. I would then submit the claim to Kristina who, after the claim was approved by Tom, would send to me a cheque made payable to the farmer. At a face-to-face meeting with the farmer, I would exchange the B4RN cheque with the farmer for his cheque to buy the shares for the same amount. The system worked, due in no small measure to the prompt turn-around of claims, cheques, and share certificates by Kristina.

The digging shares were also an issue in other areas, and John's work to sort it out taught B4RN a valuable lesson.



Paul Parsons and Frank Brown blowing the fibre to Dent.



Typical road to a farm.

were 'off-comers on the make'. It wasn't until Dave Ryall, bless him, reminded Barry that the failure of Fibre GarDen was fresh in the minds of Dentdale residents, some of whom had contributed to Fibre GarDen, that Barry recognised our difficulties.

At a meeting between Barry, Kristina Fournier, David Pilgrim and myself with Dave Ryall listening in, the Dent representatives suggested that I should measure the work done and compile a claim form which would then be signed by the farmer claiming

Frank Brown was instrumental in getting the fibre to Garsdale and Dent, often volunteering on weekends to make it happen. In November 2016 Paul and Frank blew 5,670 metres of fibre in one continuous blow from Barbon to Gawthrop, the hamlet at the edge of Dent. This set a new record. To Infinity and Beyond you might say. This very long dig had been moled in by Tony and Liam Swidenbank, and Graham, AKA TS Trenching, and it blew well. There were no properties on the route over the fell, so the fibre was uncut. There are many small farms on the hillsides around Dent, and it was a marathon to connect them all. It really helped public relations that Frank was a farmer and known to many of them, and the farmers started to get on board.

The main B4RN workforce was tied up in other village builds, but they, too, were pulled into Dent, where the people were desperate and upset at the failure of Fibre GarDen.

John Sibley and the volunteers organised all the digs to the farms, no matter how remote they were, and enlisted the help of route champions, who knew all the local farmers.



The disc cutter. It didn't work very well on the tough fell.



On route 5 above Cowgill. Don Bentham choosing weapons.



Moleing the duct over the tough fell.



Extra wheels on the tractor for grip.



Jim is also one of the volunteers and claims to own ...



...the biggest B4RN spade in Dent.



Hard to spot your neighbours - very sparse population.



Finding the septic tank drain.



Dent duct delivery by Fiesta.



Bruce Alexander and Frank Brown blowing core fibre.



An early morning start.



The terrain. Not for the faint hearted.

The tribe grew, and the individual skills of the people were applied to the project.

The group organised more of the routes to make sure they worked, and got the duct to where it was needed. If all else failed, it went in the boot of a Fiesta.

Enter stage right, the mighty ‘diggerers’ of Dent. Because of the very difficult terrain, the Dent diggers had to resort to serious kit. Nothing stopped them getting to where they had to be. The digger and mole tractor worked together: The digger would remove any obstacles in its path and sometimes dig under walls, or they dug under them themselves. Don Bentham dug a lot, and the photo shows him changing buckets, the right one for the right job – ‘choosing weapons to have the most effective results,’ as he said.

One of the jobs that is so vitally important is finding the septic tank drain before you dig the duct in!

Once the ducts are in a route, then the blows begin.

Bruce took over from Chris H, who was tied up with lambing, and he and Frank did most of the blows in Dent, with the civils team helping on the really big ones. He showed Frank how to blow and as Bruce was tied more to his desk, so Frank did a lot more blowing. Between them they trained new young staff.

They often had an early morning start in the hope the blow would go well. The photo shows a 7km blow of 288f. They were fleeing off 2km to go back to the cabinet and then starting the core off on its journey onwards. According to the Facebook Hyperfast Dentdale records, this blow should have taken a day, but took a week.

Some of the fields look very easy to dig, but the limestone was often present and lay in wait to dent the duct. Dentdale is a Geological mix.

Dent had quite a few blockages where the fibre



Frank Brown and Will Dehany digging for a blockage.



DentBentDuct.



Frank, Sam, Bruce and James looking for the dent.



Matt, Bruce, Joe, Paul and Adrian join in on another blockage.

would not go through, but Frank, Bruce and Will would not be beaten. They measured to where the fibre stopped and dealt with the obstructions and flected. Sometimes clearing the blockage meant the fibre blew again and no fleet was needed. These photos show the problems, like a bit of DentBentDuct. If a rock was too close to the duct when it was backfilled, it could Dent it. Dent had an awful lot of rocks.

They had several core routes coming out from the cabinet, all very long routes so the fibre blows were very difficult. In some areas the fibre flew through, but Dent was a steep learning curve for the diggers.

They updated the Hyperfast Dentdale Facebook page almost daily to keep everyone involved with progress and to recruit volunteers. A lot of these photos are from there.

About this time it was a mad scramble to help all the groups who were actually digging. (2015/16). Nowadays things are scheduled better, but in those days B4RN was still struggling for staff.

As more customers got on board, more local staff were employed and things got more organised. A civils team was taken on, and they obtained code powers, which meant we could get road crossings done quickly and more efficiently. The civils team also did some blowing, so on the really difficult blows they could help Bruce and Frank dig holes and fleet.

The theory of a blow is that there is a chamber every 500 metres and you blow and fleet if necessary. With a small fibre you can often blow 1000 metres in one go. If you have very long routes, over 5km you can start in the middle, fleet off enough fibre to go each way and blow both ways, fleet where necessary and leaving spare fibre in each chamber. In Dent, the rocks decided they knew best, and tested the blowing teams to the limit.

The Dent network needed very long runs of 288f,



Will Dehany and Frank Brown doing infinity.



Sam and James on a frosty morning digging for a dent.



Will and Frank fleeing.



A good blow day, with Sam and Nick Hall.

which is notoriously hard to blow. So the odds were stacked against them from the start, but they persevered, with one 2km blow taking a week to complete.

But in the end they reached Richmondshire over the rough moor and enabled many other communities to join on. By then there were contractors helping out, and they, too, learned on the job. They invested in better kit, they welded attachments onto their gear to hold extra reels, and they worked in all weathers. Because of what Tony the contractor had learned in Dent, he also helped Garsdale to complete the Fibre CarDen project, sharing the new-found knowledge of the pitfalls of digging. Each community then had to raise the money in investments to pay them, as there was no funding in those days. The farmers had been paid in shares for their digging work. The going rate was £1.50 a metre.

Steve Foster and Tony Middleton, the contractors, modified and upgraded their kit constantly to cope with all sorts of terrain. Steve also did many of the drills under the farm tracks and roads with his mole. To do this, you dig a big hole on each side of the wall or road you need to go under. You direct the mole to the hole on the other side and hopefully it pops up in the right place. They could attest that it nearly always did. But sometimes it did not. The tracks have to be checked for water, electric or phone lines, and can go under them. But usually if there are any present, a road cut is done instead. This became much easier once B4RN got its own civils team. The routes were very long, so an awful lot of fleeing went on in Dentdale. Sam Robson joined the B4RN civils team and rocked up to help get the fibre through with Frank and Will. They perfected the infinity dance, as the following photos show. Once the fibre has been blown as far as it can be, it is fledted out in a figure of 8, and then it is turned over to find the end and the blow starts again from that point.

Several volunteers managed their own routes.



It is here somewhere...



Sam and James. First lift it up...



...Turn it over and step through.



Sam Brown and James Taylor from B4RN civils doing the Infinity loop.



Steve Foster fettling the mole.



Digging the hole for the mole.



Steve Foster with his pneumatic mole.



Steve with version 2 of the pneumatic mole.



View of half of Dentdale from near Dent Station looking west. The core route of B4RN fibre from Barbon arrives through the centre of the photo.



The official Dent Lindsey spade.



The dig up the dale from Barbon to Dent.

John Feltham reports: ‘Both Antony Fisher on the south side and me on the north (and no doubt other section leaders) walked all of our sectors several times in all weathers to work out the best places to dig, which was often nowhere near the initially suggested routes provided by B4RN, based on Google Earth screenshots.

We negotiated and agreed what turned out to be provisional wayleaves with landowners, which were ultimately replaced by “as dug” ones. This is because, sometimes, on the day, we had to think on our feet when encountering problems, and so had to re-route. Sometimes it was because the brilliant Tony Middleton had a brilliant idea!

I think it is also worth mentioning that our wayleave maps were made using a subscription to “Parish Maps” organised by David Pilgrim. These maps were infinitely superior to the Google Earth-based ones which had been suggested to us. They enabled a great deal more detail to be included since every

building, structure and boundary were clearly marked. It enabled us to create maps, which also showed the utilities, etc, and anything else relevant to the location of the duct that an unannotated map could not show, e.g. distances from field gates to where the duct comes through.

I really enjoyed the map making. John Sibley unofficially awarded me the “best maps” award!’

Some of the volunteers with their MBE spade awards. Some others are too shy to be photographed.



Jim Bolton reports: ‘I now know what the local sheep feel like, having been out in all weathers. I will not forget the giant drum of ducting from Geoff Woof’s down the field to and under the road. My first day on the job, David Pilgrim said to meet Ray by the salt box at the top of Barbondale and dig the ducting to the school in Dent - a daunting prospect as I could not even see the school from where we stood. Between trenching, I would call on John Sibley who would have a few job cards for properties that needed prepping for fibre. John would be way ahead, having been to all the homes, and found out exactly where the entry point for the duct was needed, even down to a chalk mark on the wall. A huge thanks to John for doing all the work involved making it so easy to follow. Also a big thank you Tim Wood, who did some early work obtaining wayleaves in the area. I met people and neighbours that only the postman knew more of’.

Dent dug over 61 kilometres of trench.



Dent Urban.



Sam and James from B4RN civils.



Rodney Beresford.



Tom Rigg loading the duct.



He's not lost.

From the Hyperfast Dentdale FB page Sept 2018

The guy at the end of the line.

He is always the guy at the back of your mind, he is the person that makes the whole project make sense. He lives with an impossibly poor internet connection and you can make a real difference to his life and his family.

Being a non-profit organisation with the underlying commitment to reach every house in the community, B4RN have always given extra importance to the 'guy at the end'.

You begin in Dent heading for Cowgill and beyond to the very point where Dentdale begins. It is 8 miles away. It takes 2 years to get there.

Our 'guy at the end' is Rodney Beresford, a giant.

He has spent a long time planning the last 2 miles to his house and has now spent 2 weeks digging it in, going where few would dare.

For example he was down in Melling this morning to pick up the duct for his last link to his house and he got the COO Tom Rigg to load it for him, and Rodney laid the whole section this afternoon.

He can now be connected!

It opens up an important link as it will now provide the possibility of connecting to Ingleton and on to Hawes.

He is the man that crossed the Pennines for B4RN in September 2018.

Thank you Rodney!

We lost him a few times, but we never worried.

Dent fusing in action



Paul Parsons fusing one of the first bullets in Dent.



Another day, another bullet for Paul, after he's blown the house fibre.



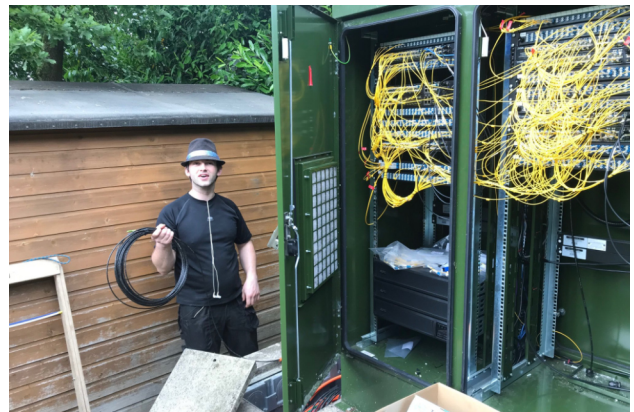
Paul working at the cabinet.



Alex Colton and Hugh Tamlin working on a Dent bullet.



The first house to come live, fused by volunteers in Dent, in torchlight.



Paul working in the cabinet.



Ann, a local route champion, learned how to fit and install the routers.



Ann Wilson was awarded the MBE Simons silver spade.

Ann Wilson's story

In the beginning there was in Dentdale.....Well, as Ray put it, disbelief in the B4RN project.

As a volunteer in the early days I, as well as most people in Dentdale, understood very little of what it was about or what it involved.

In reality, it was a mega undertaking and seemed impossible for the community to accomplish.

This sort of infrastructure surely needed the expertise of a major provider?

When I look back now, knowing that Dent dug over 61 kilometres of trench through difficult terrain, and laid fibre to every household, I find it mind-blowing.

Dentdale has its own fibre network, thanks to David Pilgrim's belief and a handful of volunteers. It was successful for many reasons but one was perhaps because of the eclectic mix of volunteers involved. Basically a bunch of ordinary folks. A mix of retired professionals, some recently arrived and some long standing, as well as farmers and willing, fit residents with spades. They brought many and varied skills to the project, and the locals had the knowledge and experience of the terrain.

Tony Middleton, an extremely skilled, local young man with the ability to adapt his diggers, was invaluable. He knew the terrain and all the pitfalls. Jim Bolton was an expert at drilling through the thick stone house walls, often 3 feet wide. When it became obvious that he couldn't possibly do all the households where people couldn't do their own, he helped me to set up training sessions for local lads in his yard. He did the training.

There were women who couldn't do the physical digging. They took on administrative tasks of fundraising and managing the grants. As someone who knew most of the folks in the dale, I enjoyed the job of communicating with householders to inform them and to collect details.

Ian Middleton did the dig from boundary to house on our property.



Ian Middleton doing Ann's dig. Ann installing a router.



Success!

From the Hyperfast Dentdale Facebook page March 2018.

We began this Facebook page 2 years ago. Two years is a long time.

Now that Dentdale is over the hump of disbelief in the B4RN project, and the volunteers at least look as though they are competent, things are a lot easier.

Two years ago things were tough. We had the important step of persuading farmers to let us cut their land open, this coming straight after the failed Fibre Garden project - a similar but ill-fated B4RN style scheme. We had to do all the awkward bits by hand, pay for a digger with our own money, and then hope to persuade someone to do the straightforward moleploughing sections for digging shares.

An early part of the learning curve was realising that B4RN are a tiny organisation and can give important advice but basically you're on your own. You have to figure it all out yourselves. Your valley will have unique problems that no-one has come across before. You will have landowners living perfectly happily in the stone age. You will have householders asking why 'their' duct hasn't arrived yet.

But two years on it all seems easy. All of the work we have been involved with has been for the digging for shares scheme, which has made any cash flow problems easier. And we have several experienced people queueing up to do work for us.

We now have techniques for streams, walls, bridges. Farmers now see the inevitability of the duct crossing their land and are easier to deal with. Plenty of fields stand as examples of our tidy work, and now no farmer wants to be singled out as the guy that said No.

And it's been a while since anyone has dared to say 'where's mine?'

We have been so successful recently that we were in danger of making a profit. So much so that we have been able to give donations to Dent School, the choir and the defibrillator.

We have been lucky in Dentdale. Despite some disorganisation at the start, we have had some good problem solvers and system organisers who just got on with it. All with about 8 volunteers.

The cake never got here. There was no time to eat it anyway.



Dentdale First Responders cheque.



Dent School cheque.



The Cowgill heart.

Garsdale



Tony Middleton collects the first duct for Garsdale.

Garsdale was also part of the failed FibreGarDen project, and the easiest way for them was to join the B4RN network was to join the Sedbergh line. Garsdale is a big long valley that had tried a wireless daisy chain solution in the past as they could not get anything through phone lines. CBN (Community Broadband Network, - see chapter 1) had been asked to help, and they suggested fibre, but at the time the NWDA (North West Development Agency), were firmly under the impression that 2Mbps was enough for anyone. The community soon found the wireless solution was not going to be long term, and they joined Fibre GarDen. When that was scuppered, they were losing faith in anything to do with

government and advisors, so they decided B4RN was the answer.

Gavin Keeble and Richard Dickinson were the first Activists, but the process with B4RN took so long that Gavin had to return to his work commitments. Richard's connection was so bad he had to go to the libraries in Sedbergh or Hawes to use theirs. He had invested in FibreGarDen, and that had failed. He had not bothered with the wireless network in the valley because it used to fail so often, as some of the relay stations were on holiday cottages, so they were often turned off when nobody was in them. Gavin used it, but having moved from Leck where he had been a B4RN volunteer and where he had got used to a B4RN connection, he was horrified at the slow speeds in Garsdale, and his business was suffering as a result.

Gavin spoke to Barry and started making plans, and Richard helped drum up interest in the new project. He found that many people were willing to give B4RN a try, but many were very suspicious, having lost their money on the Fibre GarDen project. So, they needed a bit of convincing.

Luckily the Dent project was proving successful, so that helped. Richard also says that the contractors that Fibre GarDen used had a very bad name with the farmers. The original contractor TS trenching (Swinny) had not been paid so had stopped working for the project, and they had got a rubbish contractor in as a substitute. Richard had to convince the farmers that substandard contractors would not be used if B4RN were doing the job.

Everyone knew Tony Swidenbank and Tony Middleton, so when they knew they would be on their land, they softened a bit. But it was a stressful time, and Richard was immensely relieved when he met Allison and Neil.

B4RN resources were scarce, and many people in Garsdale, like Dent, had already invested in Fibre GarDen and lost their money (It was reclaimed eventually) so they were very sceptical about another project. Allison Redpath had just moved into the area, and she and her husband, Neil, attended the village meeting about B4RN, where volunteers were sought. Gavin and Richard told them all what had been done and what still had to be done. They joined up, and Allison sent an introductory email to the residents of Garsdale to raise awareness of the project and to enlist volunteers.

There was a core team of about 7 - 9 people who worked nearly every day. Alan and Peggy Critchlow, Austin Sedgley, David Heller, Steve Inman, Philip Johns and John Colton, with Alex Colton joining in at weekends and evenings after work. Dave Bracken did the GPS mapping.

Allison says they all got on really well, and it was often a lot of fun. Initially there was a handover and introduction meeting with Barbara Hartley, who had brought the line in from Millthorpe/Sedbergh with her husband Derek. They gave the group all the benefit of their experience, because at the time B4RN did not have anyone available to advise them. It was extremely beneficial to have had this meeting and they gained a real insight into what was required.

Alan and Austin took charge of the wayleaves; Richard and Gavin had already sorted a lot of them, and Allison recorded them, so she knew where the route could go. A spreadsheet was maintained and a newsletter sent out so people were aware of the progress being made. Derek Hartley helped with the tube maps and provided a great map and information for them. Allison and the volunteers knocked on every door and visited each farm to communicate what B4RN would entail, and she believes that because she and Neil were new to the area and were unaware of any issues between people and had no involvement with past schemes, they were welcomed. They had just moved into their new home and people were interested and friendly, so it gave her a chance to explain about B4RN.

Peggy and Alan Critchlow helped out with advice, as they had lived in the area a long time, and they helped sort wayleaves. They worked on the core team, and Allison told them where they were all needed each day. Peggy said Philip Johns made sure they had supplies of duct etc. The householders kept them supplied with refreshments and were very appreciative of what they were doing. Peggy and Alan were very keen walkers and knew all the tricky bits in the land. Working as a team, they advised on route changes to make life easier.



The core team of volunteers working with Tony Middleton, the contractor.

Peggy said it was great to be on the team, and Tony and Liam were brilliant with the diggers. The team did all the tricky bits for the contractors, hand-digging under walls and streams, etc., leaving them to bash on with the mole.



The volunteers walk to work.



Late night for the contractors and volunteers.

The whole core route was done in record time, as they were very lucky with a mild autumn. Allison says it was a really good time for the dale, everyone helping in their own ways, but the core team worked non-stop. They did all the community assets and a lot of the garden digs for the elderly.

The government voucher scheme started during this period. That meant a lot of their project could be paid by the government once it was built, and householders had a small grant from B4RN to pay contractors to do the house fittings and garden digs. (Although most were done free by the volunteers in actual fact.)

By then many lessons had been learned in Dent, and the contractor who did the work there had also upgraded his kit and lived in the area, so he knew all the farmers, and that made things easier as he 'knew what he was doing'. Tony Middleton and his son Liam were just amazing, Allison says. He rang her every morning and told her where he was working and if he needed volunteers. Allison and Tony arranged everything between them. Others joined them when needed, and so they took up the strain, with contractors working long days. However, they did it, and as Alex lived in Garsdale, she was on the spot to fix things and also to try to get information out of B4RN, as she worked there as a splicer. The team did the house digs when the contractors did not need them on the core.



They have it in spades.



Digging where diggers could not be used.



And there was tea.

Allison recalls the first dig they did with Tony on Maurice Waring's land. It was full of stones and boulders, and she just thought 'we are never going to be able to do this'. They carried on, every day for 3 weeks, sometimes in awful weather, to get the momentum going. People came out to see what they were up to, and duct started appearing through the valley. John Colton stored it all for them so it was handy.

The farmers wanted to know how it worked and what impact it could have on their land, so the team showed them. One farmer followed it right through his farm to make sure it was 'done reet'. He thought it was 'amazing'.

Allison says she and Neil had just bought their cottage and were doing it up (still are!) so had taken a sabbatical from work, and so they just gave their time every day to this worthwhile project. They met lots of people, and they knew how much internet access was needed in their valley. Every day her mantra was 'we will keep going'.

All the stretches up to garden walls were dug by volunteers, and then the mole took it through the fields. The volunteers went where machines could not. This kept the contractors doing the long stretches and kept the costs down for the community. You can see them on the photos, going down the steep bank where it was not safe to use a tractor.

Tricky bits needed getting through and many hands made light work. (No pun intended.)

The job got done, with every single property getting a fibre to their door. Fibre GarDen became B4RN, and was dug thanks to the power of the community.

Richard said that there were still a few wayleave problems, a legacy from the FibreGarDen contractor's wayleave officer, who had put people's backs up, and this delayed the route due to a road



John Colton digging under a wall for the duct to go through.



When mole ploughing a hole was dug under walls by the team.



Volunteers backfilling the trench over the duct that has gone under wall.



The mole with the duct ready to thread under the wall.

crossing into a farmer's field. But Richard managed to sort it out. He said it all seemed to take a long time, and people kept asking 'when when when', but in actual fact it was about 14 months.

The diggers they got worked really well and fast, and he said Allison and the volunteers did all the 'hard bits' in advance so they could 'bash on in the fields'. He had stepped back due to health issues so the volunteers stepped up and made it all happen. Richard says the voucher scheme made an enormous difference to the project. People still had not got their money back from the company hired by the FibreGarDen project, and many could not afford to invest again. He says 'Thank goodness we persevered, the community got together and made it happen, and I dread to think what would have happened to us when Covid struck. B4RN made life bearable as the libraries were shut, mobile coverage intermittent and no other choices. In power cuts the EE mobile service went off, sometimes Vodafone would work, but not in the whole of the valley. With B4RN we could order shopping to be delivered and keep in touch with the world.

A lot of people put a lot of time and effort into it and we all reaped the rewards. Gavin helped in the background although he'd had to go back to his work, and we had regular meetings in the village hall.'

Refreshments were provided! House kits were installed and everyone geared up for the fibre blows.

Phil had a personal complaint (!) 'Garsdale is 9 miles long and home to only 135 residential properties, plus some holiday/second homes, which are strung out along the dale, so coming together as a community was fairly rare. B4RN changed that,' he said. 'Once the residents took on the project they came together to make it work. Sometimes too many turned out to volunteer but many, who could not help with the digging, provided the diggers with vast quantities of bacon or sausage butties, cakes galore,



Danish style sausage rolls and beer cake made with Guinness today.



Another day and more delicious snacks with tea.



Philip drilling the wall for the outside box.



Alex closing the box after the fibre blow.

tea by the gallon, hot soup and even had Danish pastries courtesy of Annette Colton who is Danish. Sometimes, I ended the day so full of food, I couldn't eat my dinner!'

A house fitting needs someone with a good SDS drill to get through the massive stone walls. A plastic box is fitted to the house wall outside, a duct is threaded through and another box fitted on the inside of the house. Philip Johns did most of the house fittings. The fittings change with time and fashion, but basically they are just boxes. The fibre is curled up safely in one of them and a fancy end is put on it to connect into a router which provides the gigabit service and wifi.

They hit many snags along the way. Road crossings were a major issue to them and caused delays, with no info coming out of B4RN at the time. Information about vouchers and government systems caused issues and confusion but they resolved them. Allison and Neil found they were the local face of the project. As changes were made it was up to them to source information as best they could.

This project must have had the most refreshments but also the most stone walls to go under.

Richard reported a snag that has not surfaced so far in the stories. This was a farmer who would not allow any Sunday work on his land on religious grounds. Once he was assured that nobody would set foot there on a Sunday, and they would work to his remit, and he was happy to proceed. All the farmers were assured that their land would not be messed up, and eventually as the project progressed and they started to see the benefits, everyone was pleased they had supported the project.

Then there was another delay when a global fibre shortage meant some routes could not be blown for a while, but Allison kept everyone updated on the fibre supply front.



Tony Middleton digging for a duct dent.



House fusing with a view.



Tony knows just where the duct is.



Railway cottages connected.



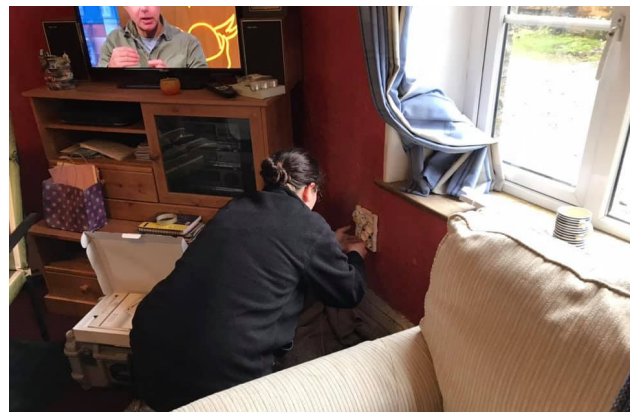
Fleeting out the fibre from the blockage.



David Hellier at the station.



Finished job with a little patch jointed on.



Alex fusing a house connection.



David reaching the other side...



Two Neils standing, one Phil kneeling (behind the wall), and Stephen lying and trying to shake hands with Phil through the hole.



David with his spade award.



David Heller's short road.

Phil said another snag was when one of the B4RN staff who had done a lot of work on wayleaves in the early days of Fibre GarDen failed to get a wayleave to his own property. A landowner refused permission to get the fibre through, so that property was fed from a wireless link.

Once the valley project was dug up to the cabinet, they went on to help David do his patch up to Grisedale.

Allison says she now knows many faces at the village quiz nights, and everyone says how great B4RN is, as was proved when Covid hit, and many people had to work from home. She says it could never have happened if they had not got B4RN.

David Heller was out on a spur at Grisedale, and he helped them all get connected - the road to a friend's house is never long. Gavin (who had been involved earlier in the project) was still very busy with his job, but he helped out when he could. When they finally came live, it was just before Covid. Gavin said it was in the nick of time, as if they had not got B4RN installed, then their business would have folded. He and his wife, Belinda, run an international business, doing presentational skills training, and Grisedale has no comms to speak of; even mobile telephones do not work in their valley. On conference calls during Covid he noted how many of the town connections would drop, whereas his was rock solid.

David Heller was the champion who got the network to Grisedale, and he helped get the connection to the little station at the top of the valley. Despite having fibre on the railway lines they do not make it available to the public, and often there is no phone signal or landline. Providing a phone at these stations is a community benefit.



Phil, Neil and Allison with their MBE spade awards.

Spades were awarded to the champions, David, Phil, Neil and Allison who had helped their neighbours.

Enter the blowers from B4RN. Frank and Will.



James Clapham joins the blowers and learns to fleet with Frank.



Frank feeding house fibre into the blower.



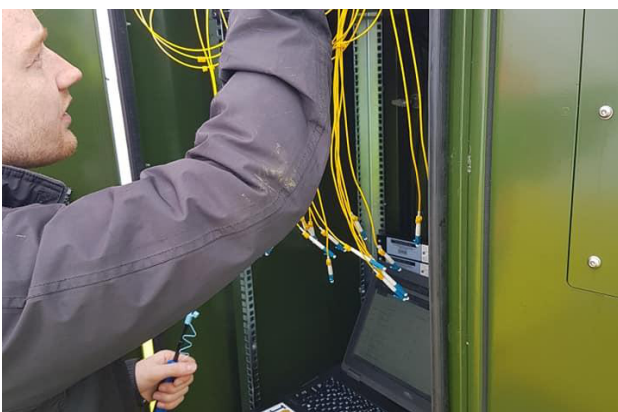
Frank Brown and Will Dehany, the blowers.



Frank blowing a fleet.



The fibre finally arrives at the cabinet.



Ben patching the customers into the switches.

Despite the lessons learned in Dent, they still had difficulty with some of the bigger fibres and damaged ducts. They persevered, and got the fibre where it had to be. Phil went out with them to show them where chambers and routes were.

A youngster called James Clapham volunteered to help Will and Frank with the difficult blows. (He got a job with B4RN and ended up fusing with the core team, and now helps in the Network Operations centre and on core maintenance with Alistair).

Phil Johns, August 2019

‘Woke up this morning with rain flying past the window horizontally and the river in full flood. Will and Frank, volunteers, along with James, work experience, will never turn up today, I thought. Lo and behold, our heroes defied the Garsdale summer and there they were, trying to persuade 288f to push through barely-there 16mm ducting on the way to the cabinet. Umpteen blockages, lots of digging, fleeting and re-blowing. These guys truly show the British Bulldog spirit. Finally gave up for the day outside the graveyard at St John’s at 7.00pm, cold, wet and very tired. 288f blowing has certainly put up a fight but with these guys, defeat is never a possibility.

To Will, Frank and James, Garsdale thank you for your dedication and will power. Thanks also to Tony Middleton who turned up after a stint in Sedbergh to help find the line of the ducting and help with the digging. Wimpish me, the promise of bacon butties faded with the weather, I promise to do better in future. You guys put me to shame!’



Gavin and Belinda Keeble. Photo credit DCMS.



Alex fusing a bullet.



Alex adding more capacity to the cabinet as customers come live.



Alistair and Ben bringing the cabinet live.

Liv Berit Engedahl

‘Will and Frank battled on, aided by James, unofficial apprentice. Fibre flew like magic between 203 to 202, round the ‘awkward’ corner in the road verge where the ducting was done during the roadworks, through the Quaker graveyard (no dead end there!), to 202. Hopes rose that the cabinet would be reached but the fibre stuck fast after 260m on its way to 201, so end of play today. Play should restart on Thursday’.

The civils team did some of the longer blows, and still the blockages happened. They cleared the ducts, and got the massive 288f through to the cabinet.

Enter the fusers. The house fusers had some lovely views. Alastair’s team of core fusers got all the joins done and the cabinet installed. He and Ben brought the Garsdale cabinet live amidst great rejoicing.

Before long, Alex had to put another switch in the cabinet, due to almost 100% take up.

Phil Johns, December 2019

‘The race to complete installing Ultrafast World Beating Broadband in remote but beautiful, Garsdale is in the final furlong. Railway Cottages are now being fitted with house kits, some have fibre and routers will shortly be on their way!’

All road crossings are done, all chambers are dug in, all core fibre blown, all house ducts are in, and just a handful of properties are waiting for fibre and routers. The champagne is chilling!’

Gavin Keeble's story

My wife and I emigrated back from Australia to a rented cottage in Leck near Kirkby Lonsdale in 2015/16. We saw some flyers about B4RN and being very tech interested and having just started a business, I got in touch with Dave Ryall, and we volunteered to do some of the Leck route. It had already got to the digging stage, so we helped with that, and then Paul White and I did all the house installations. It was a great way to meet everyone!

We then bought a house in Grisedale (off Garsdale) and were told by Dave Ryall it was potentially getting B4RN, so we then volunteered again!

It helps to understand our location. Garsdale is not a well-known Yorkshire Dale, but Grisedale is unknown (almost)! It was once the subject of a Yorkshire TV documentary and book - 'The Dale that Died'. Everyone who comes to visit says Grisedale is the back of beyond. It's a cul-de-sac.

1250-1500ft up, so it gets all the weather - it's also one of the wettest places in the UK - 9ft of rain last year.



Belinda and Gavin Keeble, photo credit DCMS.

We don't have mains water; everyone is on a well, spring or borehole. We have no mobile reception. And, the BT landline is literally at the end of the line, 5 miles or more away from the local box. BT said they'll never be able to deliver good internet, let alone clear telephone lines out here. During Storm Arwen we had no power for 8 days! It's not for the faint-hearted, but it's wonderfully wild and full of wildlife.

To stay in touch with the outside world, we paid for a Kencomp business microwave 20Mbps service, with 100GB data cap. It cost us £114 a month! It was hopeless. It collapsed every week. I talked to customer support a lot! Hilariously(!), when RAF jets flew over the signal just dropped out. So we were absolutely desperate for good internet, not just for the internet, but for a phone line. And not just for checking Facebook, but for our businesses! If we hadn't heard B4RN was coming to the dale we would never have considered moving to Grisedale.

Richard Dickinson and I became the first B4RN champions in Garsdale/Grisedale and met with David Pilgrim, the driving force behind the Dent and Garsdale route, numerous times over a few months. We

were lucky as most of the funding was in place following David's team's hard work. So, Richard and I decided to take the bull by the horns and visit every landowner in the dale whose land lay on the planned route. We went to talk face to face to the occupants, endeavouring to get their support, and ask them to sign a wayleave. Virtually every conversation took a lot longer than we had envisaged! It was a very hard, mostly thankless task, and took a lot of time, many people landowners did not understand why they would not be receiving payment for the ducting to go across their land - after all, they received annual payments from BT/ENWL so why shouldn't they receive payment from B4RN?

We also arranged a village meeting through a flyer drop, and presented to about 40 people. The task was becoming more and more time-consuming (and painful!) as I was running two businesses. I decided I had to give up the Champion role and hand over to someone else. Richard pulled back his time too, and we handed the baton over to Neil and Allison, and David, plus others, who did a far better job than I did, and got B4RN up and running a few months before Covid.



I'd like to reinforce the fact that, if it wasn't for B4RN, running two international businesses during the pandemic would have been impossible and we would have gone out of business. It saved our lives! Thank you.

But our association with B4RN didn't end with the service going live. Somehow we became a 'face' of B4RN. The government's Department of Culture Media and Sport asked us if they could use our story to sell their broadband Gigabit voucher scheme. I don't know why but we said yes. They interviewed us via video-call which we couldn't have done without B4RN. In fact we had a bit of a laugh and shared our screen whilst running a speed test which showed over 900Mbps symmetrical - they were completely flabbergasted. They then sent a photographer out. [Here's a link to photos](#) taken by the DCMS photographer

The DCMS then used all of this for PR on their Facebook page where it got some trolling and negative comments because it was worded badly. It implied we had been given the £1,500 personally rather than as a voucher to B4RN!). It was also used on their website, and since then our 'case study' has been used all over the place.

We were featured in a DCMS press release in August 2020, and then in a local BBC News interview the same day (we were interviewed by the BBC's David Molloy).

Then we were contacted again in Jan 2021 by a Policy Adviser who wrote to ask about how we found engaging with B4RN and other stakeholders, and any particular barriers faced.

Then we were contacted yet again by the DCMS in February 2022 to ask permission to use our story to illustrate part of their business plan. This was also put on a DCMS press release.

A German consultancy contacted us about our experience with vouchers.

We were also asked for our consent to an advertorial in a piece in Wales.

And, then someone had seen the PR in Scotland and out of the blue they got in contact with us to ask about B4RN and how it worked

And, finally (I hope) I was asked along with Richard to do some PR shots and an interview for CGTN Europe (the English-language news channel of China Global Television Network, based in Beijing, China) who had heard the B4RN story. It gets everywhere!!

B4RN also use our photos on the website too.

We remain champions of B4RN in the greatest sense. It's the best bloody internet in the world, and we're in the middle of nowhere!!



The end of the Garsdale route to Mallerstang gets to the Moorcock inn.

With the completion of the Garsdale line, talking to the volunteers they are still involved in one way or another. Peggy said that just this week someone came up to her in a shop to congratulate them on getting B4RN to the valley, adding they would not have considered living in the dale if it did not have good broadband. People always comment on how good the service is and how helpful everyone at B4RN is if they have a problem. Old houses and wifi are a major issue, but there is always plenty of good advice. So the joy of the project is still there quite a few years after they finished building it.

Mallerstang, where Peggy's friends lived, became interested. She told them she would help them get it into their house, but the village would have to come together to make it happen for everyone, and that is what they did. To get there involved a long dig, with Lunds the first stop. Now Mallerstang is a gigabit village too.

From Philip, January 2020

'Wow! All house kits have been fitted to all the properties that requested B4RN services in the parish of Garsdale! This was the last and Alex went beyond the call of duty to come out on a Sunday morning to fit a router, much to the great pleasure of the owner, who previously had no broadband at all. Next stop the pub, B&B and Mallerstang and beyond!'

Garsdale cabinet also fed the Lunds project until Mallerstang joined on, and so the web of ducts entered Richmondshire. Lunds (Cotterdale) is at the intersection of three counties, Cumbria, Yorkshire and Richmondshire (which is not actually a county anymore but still has the sign). Gina from Cautley masterminded the dig to get the tiny Lunds community joined on and helped advise the Mallerstang tribe. Their stories come later in this chapter. Cautley is itself in the Sedbergh chapter, as the feed to Garsdale comes from there. 27.8 km of trench was dug for the Garsdale project.

Stefan Kosciuszko's story

Now with the last fitting by Alex (well done for so ably following on in the footsteps of your father, John) this is the last chapter of the story that started in 2010 (THAT winter !!) with Fibre GarDen and the team effort to bring superfast broadband to Garsdale and a valley with no mains water or public sewerage! There was a small team of volunteers that had the energy and vision to volunteer to undertake, totally unpaid, thousands of hours of meetings, paperwork, fundraising and shoe leather to get this critical service for their community in Garsdale and Dent.

Briefly remembering some of those who contributed, without whom it would not have been possible, and conveying many congratulations to;

John Colton, who with his encyclopaedic knowledge and experience of all matters fibre and technology-related gave us all the (slightly mad) confidence to take on the BT monopoly and make the government recognise our small rural idyll. In 2012 we were the first community in the nation to get a Rural Community Broadband Grant (£157,000) and a visit from the then Secretary of State, Owen Patterson, as part of the government's scheme to bring broadband to Britain.

This long arduous road had many twists and turns, but a dear favourite vignette of mine was a "guerrilla operation" by John and Stefan to check the existence (or not) of the fibre backbone network owned (and under-utilised) by Network Rail on the Settle-Carlisle Railway line. And naturally we used the trip to visit the Moorcock for an ale or two.

Andrew Fleck our brilliant and tactful chairman and leader for being a first class shepherd (and heavy-lifter) and keeping all the idiosyncratic sheep on the B4RN farm and generally the project moving forward. This is in addition to his duties as Headmaster of what is increasingly recognised as one of the best and most distinct boarding schools in the country, firmly anchored in this amazing community.

Anne Fleck, director, who ably and efficiently acted as our face to local government and other local/regional institutions and who executed innumerable other critical project tasks.

Tony Roberts our diligent Board Secretary and Director for doing all the paperwork nobody else wanted to do (there was a lot!!) and with his sage and measured advice, generally ensuring we were compliant with all rules and regulations.

The community - spirited and visionary farmers who gave the project early encouragement (you know who you all are) and wayleaves for the cable to cross their land.

Those very few folk who were initially cynical and sceptical, but generally not obstructive, thank you for indirectly spurring the team on to prove you wrong whenever the going got really tough.

Andy Hudson, former MD of Network Rail, for originally kindly offering us use of a spur to their national hyperfast fibre backbone along the railway line and giving us REAL hope that our valley could enter the 21C, only for Andy to be stymied at the last minute by the bureaucrats.

A huge final congratulations to B4RN and all of their first class leadership and staff for bringing this wonderful story of community effort (all diggers!!) fully and finally to a successful conclusion with their vision and unwavering support and confidence in our community to get it done.

This is from a homesick refugee in Hong Kong, who is not a wordsmith, but wishes he could write some poetry on the symmetry of the project being started and finished by a father and daughter team who are longstanding (even upstanding!) family members of the Garsdale community.

Once again to B4RN a salute from the other side of the world.....and many pints when I return.



The long route through Lunds to Mallerstang.



Richmondshire, Cumbria and Yorkshire road signs at Lunds.



The handover point for Mallerstang.

Lunds and Cotterdale


Once the fibre got to the Moorcock Inn, there were two routes; one to Mallerstang, and one to Hawes. On the way to these new parishes there were a few small hamlets. Two of them asked B4RN if they could be connected as quickly as possible. They did not want to wait until the next new cabinets that they were assigned to were built; they wanted to ‘borrow’ the 24 fibres that go to the new cabinets until they were needed and then swap onto the network when the new cabinets came live.

Lunds were the first to dig to Garsdale cabinet. They had a group of houses with businesses that were really desperate for connection. Their area was where three counties come together, Richmondshire, Yorkshire and Cumbria. Gina Barney from Cautley met the Activists at a volunteer day at Melling and took up the challenge. One of the businesses put a lot of the money up to do it, and vouchers provided the rest. B4RN took some persuading, but Gina is known for her persistence. She installed all the houses and supervised the digs, and she got them done. She then helped Frank blow all the fibre in. Then she got the volunteer fusers in to fuse them all. Months later, the lines were reversed to feed them from Mallerstang, but all through Covid they had connectivity.

The photo shows where the dig ended, and the duct reel was where the Mallerstang team had to dig to, but Lunds had saved them quite a few kilometres of digging and also self-financed it all.

It was a good start for them. Cotterdale was similar and was featured in a newspaper article in May 2022,

Richmond MP Rishi Sunak was there for the switch on ceremony and photo shoot: Sunak, later prime minister said, ‘Volunteers in Cotterdale dug in about three miles of cabling with the support of non-profit community benefit society B4RN, using a Government voucher scheme, as well as £10,000 from the national park authority’s Sustainable Development Fund (SDF)’. ‘They have installed gigabit full fibre broadband to all 14 homes in the hamlet, which is situated off the A684 in Upper Wensleydale.’

Beyond the book 
[Cotterdale News](#)



Frank Brown and Gina blowing the fibre to Lunds.



Gina and Will Dehany fusing the Lunds bullet.



Installing houses on the training day.



Fixing the external house duct to the wall.

Mallerstang

John Peel from Mallerstang had just moved into the area and had seen the Channel 4 programme Lakes and Dales that showed how Barbon and Clapham had got B4RN in their area. He found out that David White had been speaking to B4RN and that Rob Bradley was leading the project in Mallerstang. He immediately joined the team to do whatever he could, as his broadband was terrible.



First training day, connecting up the first houses.

Rob was doing all the wayleaves and planning the routes with B4RN, and John set about raising the money.

Gina Barney from Cautley had brought the core close to them at Lunds, so a large length of their main route in was done.

John could not get any help from the council, but the Yorkshire Dales National Park was supportive, Andrea Burdon was his contact, and she got them a grant, which paid for the cabinet.

They had many delays getting the route completed. From where they joined Lunds, they came down the valley and needed to go under the viaduct. Network Rail took forever to approve it, even though they had wayleaves from the landowners. It caused an 8-month delay, then a further 3-month delay because they had to 'be present' at the dig, and that took a while to arrange. In the meantime contractors installed house kits.



The outside clip with the wall drilled.



Hand digging where diggers could not be used.



Pick axes and mattocks to get the trenches dug.



A B4RN presentation for the community.

Vouchers were available, and the dig grants were in operation at the time.

John said Rob Bradley did all the real work, and John just helped him.

Householders either dug their own gardens or used the dig grant to pay a handyman to do it for them. Chris Scrimshaw, Rob or John helped to install the house kits for everyone and advised on siting of routers in the house.

They got all their vouchers up to the cap, and although some expired due to the delays with Network Rail. Amy at B4RN got them reinstated.

Rob remembers all the working parties, and how the volunteers all helped each other. There were lots of places a digger could not go, so they found ways to do it by hand.

In July they held a volunteer day, and work was done through a wood which was impossible for mechanical diggers, and across Outhgill village green, and most residents helped.

The village team took over to get to the houses. First the sod was removed, then the pickaxe was used, then spades, then trowels.

They only had one wayleave issue, but they dug around that land. It was owned by a trust, and they did not seem to understand what B4RN was about, but the volunteers overcame it.

John says the best thing about it all was getting to know everybody, and the fact that if anything goes wrong, it gets fixed right away. He had to ring the B4RN help-desk one morning, spoke to people who knew what they were talking about, and the problem was sorted in 10 minutes.

They have parish meetings every three months, and people have no worries about their broadband any more. It just works.



Plenty of volunteers to help dig down the woods.



Laying the ducts in the trench.



Reinstating the trench.



A long hard dig was done.

Dave White and Rob visited all the houses to gauge interest, but Dave had to back out and Rob took the project forward, helped by John. He helped to put all the house boxes on, and out of the whole area there were only two who did not want it, as they did not have computers and were not interested. He took the duct to their houses anyway.

There are about 50 houses in the area, very isolated and spread down the valley. Gina was a personal friend of Rob and his wife Sue and gave advice and encouragement throughout the project.

Rob says, 'The local residents at Outhgill got together to bring it through the church yard and up through the woods. This was a great example of a community getting together to carry out the work. The weather was fine and coffee and biscuits were served! Everyone had a great day, and we cracked it'.

Before and after photos show a very good job was done.

B4RN lent them the Toro to get through a big garden to get to five houses. This was a particularly long stretch of meadow garden in Shoregill to get through without crushing sapling trees or upsetting the bees, so they called in Mr Toro, and Iain came and trenched that bit for them.

They got the core through to the houses. The volunteers laid the duct and backfilled the trench, and long stretches done safely and well.

The volunteers continued ducting to their houses whilst Tony was bringing the main core duct through to them with his big machinery.

On the core route 1 to Mallerstang their biggest hiccup was getting the core to Ravenstonedale as it was wild terrain, and there was one small field that the landowner would not let them through due to a past experience with BT making a mess in it.

The trenchers at work



The dig continued, many hands, many trowels.



The 'before' photo.



Mr Toro., Iain Robertson from B4RN.



The 'after' photo.



Trenching through a long rough stretch, lots of bees, so no diggers.



The victory salute.



Mr Toro making progress.



Before and after.

The terrain, the man, the machines



The road to Mallerstang.



The terrain and the hills.



The dig over Ravenstonedale.



Tony Middleton.



Tracked pneumatic mole plough.



Another pneumatic mole plough.



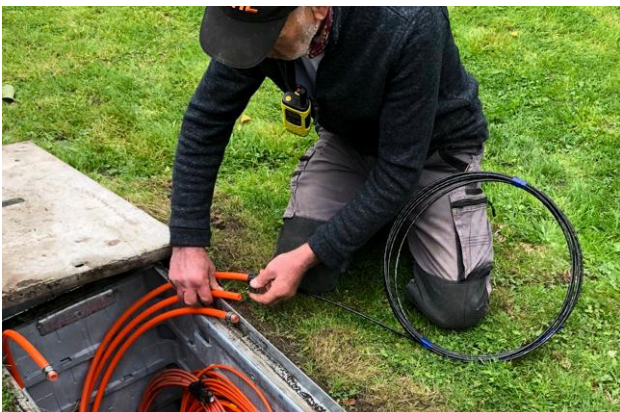
Laying the duct in the trench.



Soft backfill on the duct.



Bruce blowing core fibre.



Bruce finishing a core blow.

One aerial installation had to be done over a track because of a neighbour dispute.

Rob had lots of fun meeting everyone in the valley, and on the training days with B4RN. He speaks very highly of their contractor, Tony Middleton with Jess (the dog), and says Tony was always willing to listen and help. He dug over some very rough terrain to reach them, as you can see from the photo gallery.

Tony then continued the dig to Ravenstonedale.

The blowing team arrived and blew the fibre in from Lunds, and then they came live off the Garsdale cabinet. They used a mixture of chambers, depending on how many joins were needed.



Barry Cheeseman blowing house fibre.



Well done to all the volunteers.



Tom Rigg B4RN COO and Matt Warman Digital Minister watching contractor Tony Middleton, moleploughing near Pendragon Castle.



Matt Warman and Michael Lee.



Matt gets his JFDI spade off Michael.



Matt watches Barry blowing a house fibre.

Bruce and Barrie then did all the house blows ready for the core fusers.

Over 34 km of duct was dug in Mallerstang

Digital Minister Matt Warman visited B4RN's project in Mallerstang. Volunteers and staff made the case against changes to the gigabit voucher scheme. Projects in Cumbria and Northumberland were to lose access to that funding from 24th September 2021.

Voucher availability continues to be a thorn in the side of alternative networks like B4RN.



Jorj Haston showing Matt how to fuse the house fibre.