

# Chapter 16

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## Allen Valleys

By Mike Robinson

It all started in 2015 when I moved up the valley to a rural farmhouse. Because I had more room, I decided to move my video production business from Gateshead to home. Most video delivery had moved to online, so a local TV commercial I had made would be sent via WeTransfer to Yorkshire Television. I realised my BT ADSL line would be slower than the T3 line I had normally used in Gateshead, so I started it at 6 pm so it could run all evening. At the crack of dawn it still was going at 80%. This was fine, as the item was not due to air until that evening. Then after a leisurely breakfast I checked—and it had crashed and timed out at 89%. So after an 80-mile round trip and a 15-minute upload via the T3 line, I was determined to improve my internet. I never realised it would take 7 years of organising, and hard work for me and a group of local volunteers.

My first reaction was to contact my supplier OpenReach / BT. After being passed around I spoke to Developments and explained my need for something better. They eventually offered me a T3 line (effectively 28 lines combined) which would give me 48Mbps. The only downside, it would cost £150k. After my sharp intake of breath, they suggested contacting their community projects department. I did and I spoke to a nice man who suggested I get anyone else interested in a better broadband together.

After leafleting the area, we attracted a hall-full of people, and probably more than 100 folk listened to all the wonders that BT offered. The only problems were, BT couldn't tell us what they could provide, the cost, and when. After 6 months of pestering they gave us a ballpark estimate—each property would need to pay £1500 to £2000 and some would get FTTP and others FTTC. Needless to say, that went down badly as the neighbouring town had just got FTTC for no upfront cost. Next, I spent a year hiking the hills trying to find locations for wifi transmitters before realising the valleys were not suited to a wifi network.

Then everything changed. From a chance find on the internet, I visited a B4RN Show and Tell day. I was buzzing when I got back home after experiencing the B4RN magic and I told the four others I had been working with.



Volunteer group ready to start the first dig at the school.

So a visit by two car loads of locals to Melling was organised. From a meeting with Barry Forde the CEO, and other B4RN staff, we committed to setting up a community interest company and then, with B4RN support we would start to prepare to build fibre in the Allen Valleys. This was no small task but people soon started volunteering to be community champions, dig coordinators, web designers, route walkers and the all-important admin.





Full meeting in the Allen Valleys



Allen Valleys exhibition tent at the village show.



Volunteer group planning routes.



Packed meeting in the Allen Valleys.

A few weeks later, a phone call from Barry Forde changed things again. After an internal discussion around B4RN's long-term strategic plan to expand north through the rural areas to the Scottish Borders, Barry made us an offer to join B4RN completely, provided we could raise £150,000 in investment. (This was before the introduction of the government voucher scheme). A fortnight later the investments had exceeded the target. This speeded things up with planning, and we moved up a gear to walk routes and gain wayleaves.

Originally the backhaul, the live connection that would join our network to the World Wide Web, was to be brought from Newcastle. This would use an old disused Newcastle University trunk route along the A69 and we would, in the short term to get us live, lease a connection from Openreach. Meetings were held to explain how the duct is laid once routes were agreed.



Laurie, Joshua and Alan are discussing the best way to negotiate disused mine workings in the West Allen.





Allendale primary school.



Volunteers laying duct at Allendale fire station.

The build started in Allendale Town at the primary school 9 months later, which was near the BT exchange. This was attended by nearly 50 people, which proved a challenge finding them all jobs to do. This was jumping in the deep end with 12x 15mm and 10x 7mm ducts to install around a pristine school playing field.



Crossing the East Allen river.



Volunteers laying duct at Allendale primary school..





Installing a large chamber.



Farmer installing duct across his land in Acton.

The build continued at a pace at weekends and during the week, aided by a small Ditch Witch mole plough bought by a volunteer. Build moved up a gear after a chat with a local contractor who gained such sufficient faith in the project that he imported a large mole plough from the USA. The number of contractors soon increased to 3, with one building a mole plough from scratch.



The mini mole plough in action.



Digging the duct in.





Work continued throughout the winter.



Terrain couldn't beat them.



The first duct delivery.

Work continued in all seasons and different weathers on all terrains, using mole ploughs, diggers and hand digging.

On training days the volunteers were trained by Frank and Will to blow and fuse fibre and install the routers.

Then after a day of training from B4RN, house kits were installed, fibre blown and spliced. Frank let one of our blind volunteers work the fibre blower...



## Training day



The volunteers.



Frank and Will demonstrate core fibre blow from the chamber.



Filling out the contracts.



Frank showing volunteers how to close the gas blocks.



Frank Brown letting the blind volunteer feel the fibre.



Frank showing the volunteers how the nano flow blower works.



Will Dehany and Frank Brown blowing house fibres.



On the radio to say, 'We have air'.





A cold dig.



Volunteer splicing after training day.



Watching Bruce blow fibre at the showtell day.



Team at work laying multiple ducts.



Volunteer wrapping a bullet.



View from the Sparty Lea cabinet.



Explaining how to pull duct.





Families digging trenches and backfilling them at Catton village green.



The weather did not stop them.



Mike mole-ploughing.



Digging the trench to the house.

But before we could get the first properties live, we learnt that our backhaul was to change. After talking to B4RN, Zayo was willing to re-route the fibre data link from Southern Ireland to Scandinavia past our door, instead of taking it via Glasgow.

This was good news, as it meant we would get a full-blown fibre connection direct to B4RN immediately. The downside was the connection point was now no longer Allendale, but 15 miles away at Whitfield, across some of the wildest country. So with the help of 2 contractors ploughing the open farmland and teams of volunteers doing the gnarly bits, another cabinet was installed in Whitfield and this saw our first connections go live in June 2020.

Things on the funding front became easier with the introduction of Gigabit vouchers.



Tape put under the sod, the new youngest project manager in control.



Laying duct in the trench at Catton village green.





Jamie Driscoll.



Metro Mayor Jamie Driscoll getting stuck in laying duct.

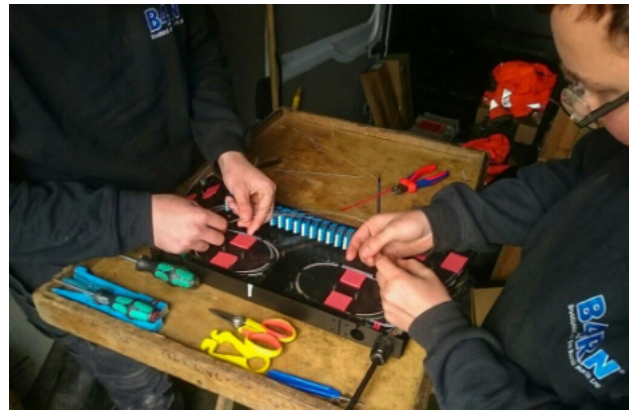


Jon Randal-Paley doing a bullet.

The North Tyne Metro Mayor, Jamie Driscoll, spent a day working with us; this was a novelty as most politicians spend just enough time to have a quick chat and a photograph. But the following day the Borderlands funding was introduced, which doubled the voucher money.

Once the core fibre was blown through the ducts the B4RN core fibre team came and fused the lines through to the cabinets, and fused the cabinet trays for the customers.

It took another 2 years of digging and planning before the fourth cabinet, which served my property, went live. But it was worth every spade of earth dug, all the soakings and muddy and frozen hands.



James Clapham doing a cabinet tray.



The B4RN fusers doing a bullet in the field.



The fourth B4RN cabinet at Sparty Lea going in on a wet windy day.





Youngest volunteer at the bridge crossing at Sudden.



Contractor laying duct with his self-built mole plough.



Triple reel mole plough.



Volunteers digging around the caravan site.

We now have the best internet, as evidenced by many comments from those in technology-based businesses like broadcasting, computer games and IT, on how good it is and wish that they could connect. Other benefits away from the internet have been social, with people making friends and connections via volunteering digs.

Work continues; we now have over 500 live properties including 2 schools, 4 village halls, 3 churches and a monastery (some of the monks turned up to most digs) benefiting from free service. Others connections are being added all the time. The network now has the security of a ring main in the shape of a figure eight loop linked into the B4RN backhaul in two locations. Other communities north and south of us have visited us and are now embarking on their own B4RN projects.

## Some of our users

Gareth Forbes, a GP in the village, says, ‘The connection couldn’t have come soon enough. Covid lockdown measures meant working from home with online interactions, critical to maintaining health care services. Much of primary care has moved online, with video, telephone and e-consultations now making up the bulk of our work. However, the area’s unreliable internet was making this challenging. My home had a very poor connection. At peak times, this can mean direct clinical work was not practical for me or my wife, who is also a doctor.’

Kate Jackson, 61, took a wooden wool-spinning wheel into her garden, propped her iPad against a brick, pressed record, and started talking as she spun—about crafts, the countryside, her menagerie of animals (cats, chickens, bees and Eileen the goose). Kate enjoyed watching videos about gardening and quilting on YouTube, so





Pulling duct into a chamber, 'One heck of a tight fit'.



Pneumatic mole plough in action.



Tyne Tees and the BBC covering the first dig.

one day she thought: how hard can it be? With the help of her B4RN broadband, she resolved to upload once a week.

She calls her channel The Last Homely House, 'which is a place to feel comfortable, secure and welcomed. That's what I wanted my channel to be.' It now has 123,000 subscribers. Last May, Jackson, who lives in the Langley area, set up a sister channel, called The Last Homely Garden. She has an online shop, nearly 40,000 Instagram followers, and even a fan-run Facebook group. She has become the linchpin of a thriving online community.

Susie White, Guardian writer, lecturer and photographer, says 'I went with my husband to the first public meetings and we took part in some of the volunteer digs. That was great, that feeling that the community were getting together to help each other, and we met neighbours that we hadn't met before. I began to see posts on the local Facebook pages - dramatic before and after pictures showing the speeds that people were getting as their B4RN service went live.

'Living quite a long way from the main road I somehow rather doubted how successful it would be for us. In the end, it all happened very fast. The cable-laying machine took less than an hour to make it a mile across fields and down a steep slope



A nice moled trench.





Volunteer team laying duct in Catton.



The tea break at the end of a rainbow.



to arrive at our gate. The installation was done by volunteers. The thin fibre cable shot out of the box, having been blown down the hill from a mile away. Amazing! With a couple of neat, inconspicuous boxes, one in the kitchen, one outside and the cable sunk across a flowerbed and a path.

‘Before the changeover, the radio would keep cutting out every time somebody was using the computer, which was very frustrating when you’re trying to listen to something. Being able to give a talk via Zoom without worrying about loss of service was great.

‘Since I write for a number of magazines, I regularly have to send in photographs via Dropbox. I was used to this taking over a quarter of an hour, during which time I would have to do something else. So I was astonished the first time I dragged 20 photographs into Dropbox and they went instantly. When you’re working this saves so much time, and my family in Hexham are really envious of the broadband speeds that we get out here in the middle of the countryside!’

You can find out more about Susie on her website (see below).

The Allen Valley project has dug over 174km of trenches.

#### **Beyond the book**

[The last homely house](#)

[The last homely garden](#)



[Susie's website](#)