

## Notes for one parish

### Proposal

A fibre to the premises (FTTP) internet connection should be offered to all houses or businesses that want it. This will enable them to receive and send data at 1 Gbit/s. Broadband For the Rural North (B4RN) invented a scheme that is now running with over 3000 users. There is an emerging similar scheme to the south of Norwich and now a new one in East Ruston. People wanting to buy a house or set up a business in the country will not move where there is poor broadband. FTTP will ensure that our house prices don't suffer.

### Team effort

There are things to be done - questionnaires, fund-raising and talking to landowners are amongst them. We need a team of people, between them covering all the skills required. One or two people cannot possibly do it. If you want futureproof broadband **you** will have to give time to the project. The current rural broadband offerings are already obsolete or soon will be. We could have a service better than any available commercially, including those in cities. Remember that as speeds rise new services will make use of them. Multi-user streaming is impracticable for us now. Imagine how poor our service will be in ten years.

### Connecting to the internet

A continuous fibre path is needed to a data centre or hub that is already connected to the internet. This might be the South Norwich scheme, a commercial company such as Aviva or a university such as the UEA. Various ways to connect to a data centre are being considered. A combination of two or all of the following will be needed:

- Laying our own private fibre across landowners' fields, in buried 16mm plastic pipes in lengths up to 2km.
- Using BT's fibre network in lengths up to 35km.
- Finding other nearby data users that have unused capacity in their own fibre ('dark fibre').

This will be a scheme that changes and expands over time. The aim is to run the entire network over fibre that is owned and managed by the scheme. To start with it might need to use sections of BT fibre or even wireless links. As the numbers of users increases, and time and money permits, the BT and other links can be replaced by scheme fibre.

### Connecting to buildings

Our end of the fibre would be connected to a cabinet from which fibre will branch out to premises. Ideally the cabinet will be in a building. As we have no village hall, Bradfield will probably use a small transport container, as an outside cabinet is costly and vulnerable. One cabinet could service over 100 premises.

Circuits radiate out to premises from the cabinet, again through buried 16mm plastic pipes in fields or verges. They will be in a star arrangement, with two fibres being laid in each circuit for a backup.

Outside each building the fibre is broken and connected to a small buried plastic junction box from which a 7mm plastic pipe carries the fibre to the building. A small plastic box is fixed to an outside wall through which the fibre enters the building.

## **Costs**

These are approximate, based on the experience of B4RN. A cabinet and innards is about £10 000. Installed fibre is about £9 per metre. A road crossing averages about £1500. An overall cost of about £1000 per building is a good guide, though this is possibly nearer to £750 now. Therefore if each connection earns £360 per year, and allowing for running costs, break-even will happen after between three to five years. B4RN had to buy installation equipment such as fibre blowers and jointers. It is possible we could buy in their services under contract or hire their kit. Landowners might want wayleave payments to cross their land, though in the north many were willing to waive this in exchange for a free service, because they needed it for farm business, or just to be of service to the community.

## **Finance**

The monthly fee charged by B4RN to customers is £30.

Money has to be available in advance of starting work, to pay for surveys, designs and legal agreements. The amount is likely to be at least £100 000. There are several possible ways to raise this.

Shares can be sold to individuals. Shareholders would not receive a dividend until the scheme shows a profit, probably after four years. 30% tax relief can be claimed as this is regarded as a risky investment. After the initial period sensible commercial dividends would be paid. Shareholders might receive a benefit of some sort at the start, such as a free or cheap connection.

A second way is to set up as a Community Benefit Society with subscribers loaning money. There is no possibility of capital gains and there are no dividend payments. It is for the benefit of the community, not shareholders. Enough interest is paid on money invested to attract investment, e.g. 5% above Bank of England rate. This can qualify for Enterprise Investment Scheme (EIS) tax relief.

Another possible option is for people to pledge a sum of money. On the basis of those pledges a bond could be raised. This is sometimes called a Lloyd's scheme.

The scheme would not be profit distributing and might be set up as a co-operative. Once the scheme is running commercial loans could be taken to fund further expansion.

Peter Scott

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