

## Summary

- All routes, work and timing are only undertaken with landowner agreement.
- Details are agreed in principle first and then a Wayleave document is produced.
- B4RN provide all the ducting, fibre and access chambers.
- Ducting can be installed using low impact mole plough or trenching.
- The landowner can self install the ducting or let B4RN supply the labour.
- Work equivalent to £1500 entitles the recipient to free connection and free B4RN broadband for 1 year.
- B4RN will make every reasonable effort to return the ground to its original state after installation.
- The community model will only work if sufficient landowners agree to free access.
- B4RN will create local employment through installing and then supporting the network.

Piece work payment table, £1 = 1 Share

Activity	Unit	Value (£)	Note
Installing fibre into ducts	per Km	100	1Km/man day
Breaking into fibre in chambers	per splice closure	100	
Fibre connection to the property	each	50	0.5 days per property
Trunk dig, labour	per metre	1.5	
Spur dig, labour	per metre	1.5	
Wall crossings (take down, rebuild)	each	150	0.5 days per wall
Installing access chamber	each	50	

## Wayleaves

Our wayleaves are simple single page documents. We indemnify the landowner against any accidental damage to our equipment on their property. They allow us to put our equipment on their property. We return the property to its original state as best we can after installation. We deal with any issues arising to their satisfaction. They allow us access, at reasonable times, to repair/upgrade our equipment. There is no payment made.

**B4RNorfolk**  
Broadband for Rural Norfolk

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The original design for this poster was produced by our friends, B4RNorth. Thanks to them for permission to adapt for Norfolk.

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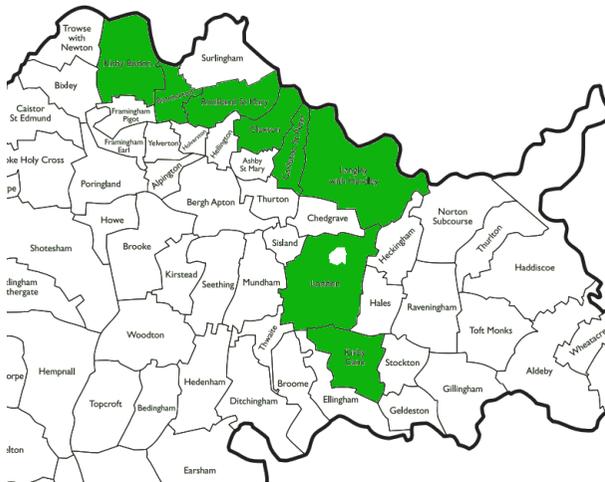
## A Short Guide For Landowners



hyperfast fibre broadband  
**B4RNorfolk.org.uk**

## Where are the planned routes?

The aim of B4RNorfolk is to give every property in our area (see map below for the first 8 parishes to be covered) the opportunity to be connected to our community broadband network. As part of working out the likely costs and timescales of connecting the 1200+ properties a proposed network route map has been prepared. The initial network is made up of 5 primary “network nodes” located in Bramerton, Rockland St Mary, Langley, Loddon and Kirby Cane. These nodes are linked by 6 main trunk routes, which in turn are then linked to routes radiating across the parishes; with further links connecting individual properties and hamlets. Around 70Km of ducting is required to form the planned network.



The combination of our rural setting and the business model used by commercial telecom companies would normally result in a fibre installation cost of £5,000 per property. Costs at this level make it very unlikely that a commercial company will ever want to supply a fibre solution. B4RNorfolk has very a different approach.

## What is the B4RNorfolk approach?

B4RNorfolk plan to install the network buried in duct laid across farmland, typically on “the other side of the wall”, rather than under roads or on poles. This approach is considerably less expensive than trenching along the highway. The work can be done by agricultural workers and the farmers themselves; it’s similar to laying a water pipe, which they do all the time. This approach when combined with volunteer labour, paid in shares, leads to a great reduction in the installation cost per metre.

Where necessary B4RNorfolk will use the highways, but this will only be for a small proportion of the duct length, e.g. road crossings and short sections where the farmland is not available to us or unsuitable.

For this community approach to work the land owners have to be prepared to grant free wayleaves to allow duct across their land. Clearly they would refuse to do this if the applicant were a traditional telecommunications company out to make a profit. However, B4RNorfolk is a community owned cooperative, run for the benefit of the community as a whole, so we hope that local landowners will support this initiative.

Each landowner with a proposed route crossing their land will be approached by local volunteers to see if they are willing to let the ducting be installed. If a landowner accepts the proposed route then an “agreement in principle” will be recorded, along with any specific details or notes about the route that might be raised.

Any changes to the route can also be agreed and recorded. Once all the details are finalised they will be recorded on a signed Wayleave document.

If a landowner doesn’t want to give their consent, then it will be noted and an alternative route worked out.

## What is installed?

Our plan is to use a standard industry practice of burying plastic (HDPE) ducting and then passing the multi-core fibre optic cable through it. The cable is blown through the ducting, using compressed air. The main trunk routes house between 1 and 7 ducts, with each duct being 16mm in diameter, links to properties use 7mm ducting.

The ducting can be installed either by using a mole plough or by burying in a narrow trench. Typically the duct depth will be 600mm (2’), but it can be less provided there is sufficient protection.

Recessed access chambers will be located where the trunk cable has to be broken out for local distribution. These chambers contain up to four stackable units each 150mm deep, plus a 50mm deep lid, their total dimension being 915mm x 445mm by 650mm deep.

## Who does the installation?

The duct installation can either be carried out by the landowner, by B4RNorfolk volunteers or by local B4RNorfolk contractors. Payment is defined in a “piece work table” (see overleaf) which is converted into an equivalent number of B4RNorfolk shares. As well as reducing the amount of cash we need to raise this allows members of the community to become actively involved with the project and to take a long term interest as stakeholders.

Where duct has to pass under roads or rivers specialist contractors will be employed.

Note: Work equivalent to £1500 entitles the recipient to free connection and to free B4RNorfolk broadband for one year.