



# Broadband for the Rural North Ltd

Barry Forde - CEO

B.Forde@b4rn.org.uk

[www.b4rn.org.uk](http://www.b4rn.org.uk)



# What is the problem?



- Broadband in rural areas is poor because:-
  - Few telephone exchanges
  - Each serves a large area
  - long lines to properties
  - Speed directly proportional to line length
  - If line long then slow broadband, a GROT spot
  - If line very long then no signal at all, a NOT spot
- Upland areas sparsely populated
- So particularly badly affected

# Broadband landscape



- Government defines **S**uper**F**ast **B**road**B**and (SFBB)
  - $\geq$  25Mbps today
  - (EU says 30Mbps)
  - Target is 90% to get SFBB by 2014
- Government/EU targets for 2020
  - 100% to get at least 30Mbps
  - 50% to get at least 100Mbps
- BT's **SFBB** product “Infinity” being rolled out now
  - Aims to deliver up to 40Mbps but no floor speed
  - Possible upgrade to 80Mbps later
  - But still line length limited (SFBB no further than 1500m)
- Virgin Media
  - DOCSIS3 100Mbps with 300Mbps possible over cable

# So?



- BT's Infinity & VM cable broadband being rolled out
  - To 66% of population using own private finance
  - Last 33% too expensive to reach so left out
- Government support via BDUK, £530M?
  - Will try to push coverage of SFBB out to 90%
  - Debateable whether they can achieve this
- Remaining 10% to get USC of 2Mbs
- Uplands are in this 10%

# Does it matter?



- YES
- Broadband vital for modern life
- Essential for farmers and rural businesses to survive
- Vital for families
- Cost of not using online services huge
  - Insurance
  - Utilities
  - Banking
  - Transport/car journeys
- So yes it matters, it is life or death to the countryside

# Possible solutions



- **Commercial?**
  - Once everyone else has got SFBB they might use any surplus capital to do rural areas.
  - This is decades away...
- **State?**
  - Will need many billions of pounds of subsidy to solve the last 10% problem
  - State piggy bank is running on empty
  - Plenty of conflicting demands for any cash
  - Rural population is small and not top priority (few votes ☹️)
  - Might get some help but not complete funding
- **Community Initiative?**

# Community



- Only way to get true future proof broadband is to lay fibre optic cables all the way to the property (FTTH)
- Fibre delivers true NGA speeds
  - 1Gbs (1000Mbs) now
  - Upgradable to 10Gbs or 100Gbs when needed
- Future proofed for generations to come
- Can communities build an FTTH network?
- Can it deliver an affordable service (£30/month?)
- Is it as difficult as the telcos would have us think?

# It needn't be complicated



- Don't dig up the roads
- Go cross country over private farmland
  - Need free wayleaves from land owners
- Use small bore ducts
  - Keeps material costs down
  - Mole plough or open trench
- Use blown fibre technology
  - Allows us to assemble network piecemeal
- Get the community digging!



# Skills



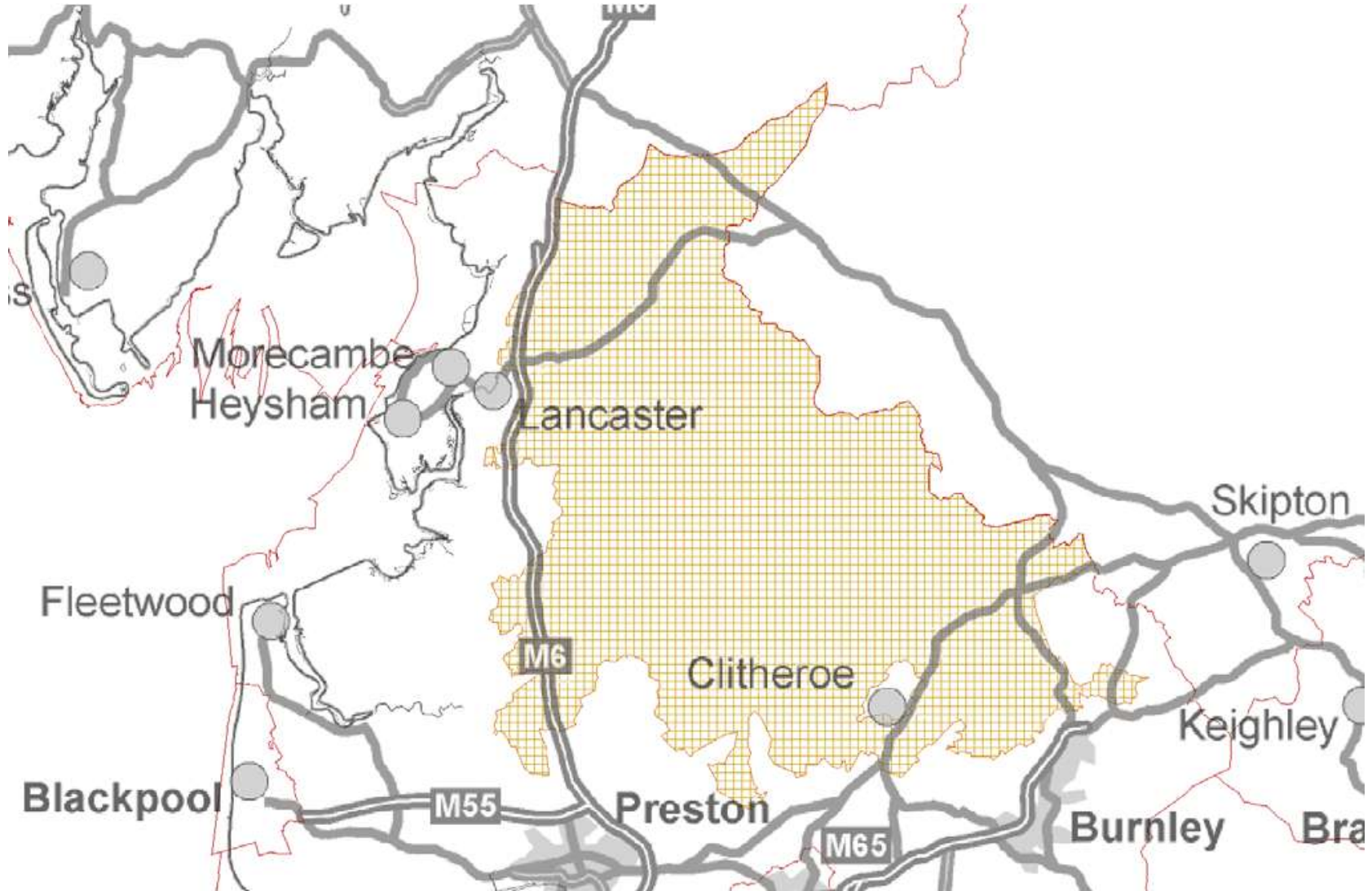
- Most labour costs are digging ducts and crossing walls and fences
  - Plenty of people in the country know how to do this
  - and have the equipment to do it
  - And are signing up to help
- Remainder is down to fibre installation and termination.
  - We have included the cost of training up volunteers within the budget.
  - And buying in all the equipment they need
  - Plenty of people have put their names down

# The approach

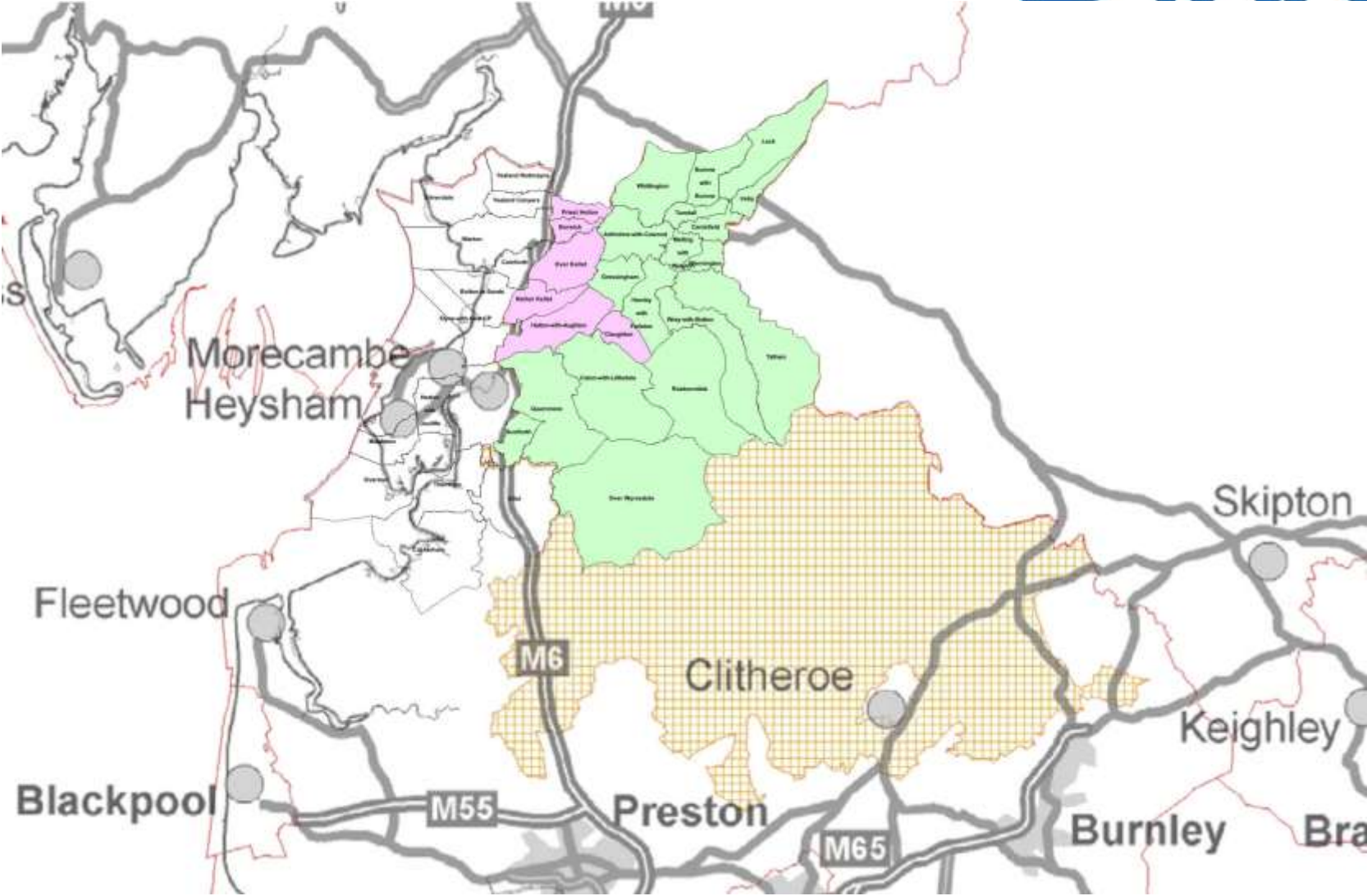


- Do a full design to establish cost of rollout
- Engage community to identify demand for service and raise awareness
- Try and assess appetite of community to provide funding and support
- Explore ways of raising rest of funding
- Build it.....

# Upland Area - Lancashire



# B4RN FTTH Area



# Area Statistics



<u>Parish</u>	<u>Population</u>	<u>Households</u>	<u>Land Mass</u>	<u>Pop Density</u>
Arkholme with Cawood	334	124	1222	0.27
Burrow with Burrow	191	73	980	0.19
Cantsfield	97	55	495	0.20
<b>Caton</b>	<b>1467</b>	<b>678</b>	<b>182</b>	<b>8.06</b>
<b>Caton with Littledale</b>	<b>2720</b>	<b>1186</b>	<b>3381</b>	<b>0.80</b>
Gressingham	153	68	817	0.19
<b>Hornby with Farleton</b>	<b>729</b>	<b>319</b>	<b>1179</b>	<b>0.62</b>
Ireby	57	32	462	0.12
Leck	189	76	1877	0.10
Melling with Wrayton	290	122	461	0.63
Over Wyresdale	348	120	7008	0.05
Quernmore	532	221	2961	0.18
Roeburndale	76	23	3566	0.02
Tatham	393	160	3938	0.10
Tunstall	105	43	436	0.24
Wennington	102	43	395	0.26
Whittington	359	178	1787	0.20
Wray with Botton	521	200	2171	0.24
	<b>8663</b>	<b>3721</b>	<b>33318</b>	<b>0.26</b>

# Cost



- Detailed Network design completed
- Build cost is £2.6M (£1040/property)
  - 100% of properties ~2500 (keeps growing)
  - No one too far or too expensive
  - It's a community project
- £1M = labour costs
  - This is work that can be done by community
- £1.6M = materials
  - This includes work we cannot do ourselves

# Community Engagement



- Need sufficient community take up to justify project
  - Launched web site [www.b4rn.org.uk](http://www.b4rn.org.uk) end July
  - enough registrations by November
- Need to raise the money, indicative amount was £1500
  - Over 500 people have indicated interest in buying shares
  - A surprising number from outside our service area!
- Need the community to donate labour
  - Lots of people with mini-diggers and kit have signed up to do the work.
  - Confident that the full work element will be delivered by community members
  - Surprised how many housewives offering to dig across their gardens to help us!
- Need landowners to grant free wayleaves
  - Doesn't seem to be a problem, none have refused so far
- Community spirit is alive and well in Lancashire....

# Broadband for the rural North Ltd



- Industrial and Provident Society Act 1965
- Company number 31352R (R indicated an IPS)
- Community Benefit Society
  - Similar to coop but answerable to community rather than our shareholders, more like a charity in some ways
- One member one vote, not related to number of shares member holds
- Asset lock



# Fund Raising



- £2.6M total project cost to connect 100% of the ~2500 properties in the design
- £1M is labour paid for with shares 😊
- £1.6M of materials that need cash 😞
  - Some via community share purchases
    - EIS 30% tax relief on eligible investments
    - £500-£20000 and must hold for 3 years
    - £750K-£1M looks possible
  - Some via connection fees £150 and subscription fees of £30/month
  - Any gaps still need filling

# Possible sources



- BDUK £530M +?
  - LCC gone with single supplier tender
  - BT appointed, all £32M of funding goes to BT
  - Community fund of £500K for rural parish support but still waiting on details, not hopeful
- DEFRA RCBF £20M
  - Area is all in uplands and we should be eligible for the £300/property subsidy.
  - EOI submitted waiting on events
  - If successful this would just about close the funding gap
  - Timing is problematic!
- Commercial borrowing?
  - Build and lease back models possible

# Building it

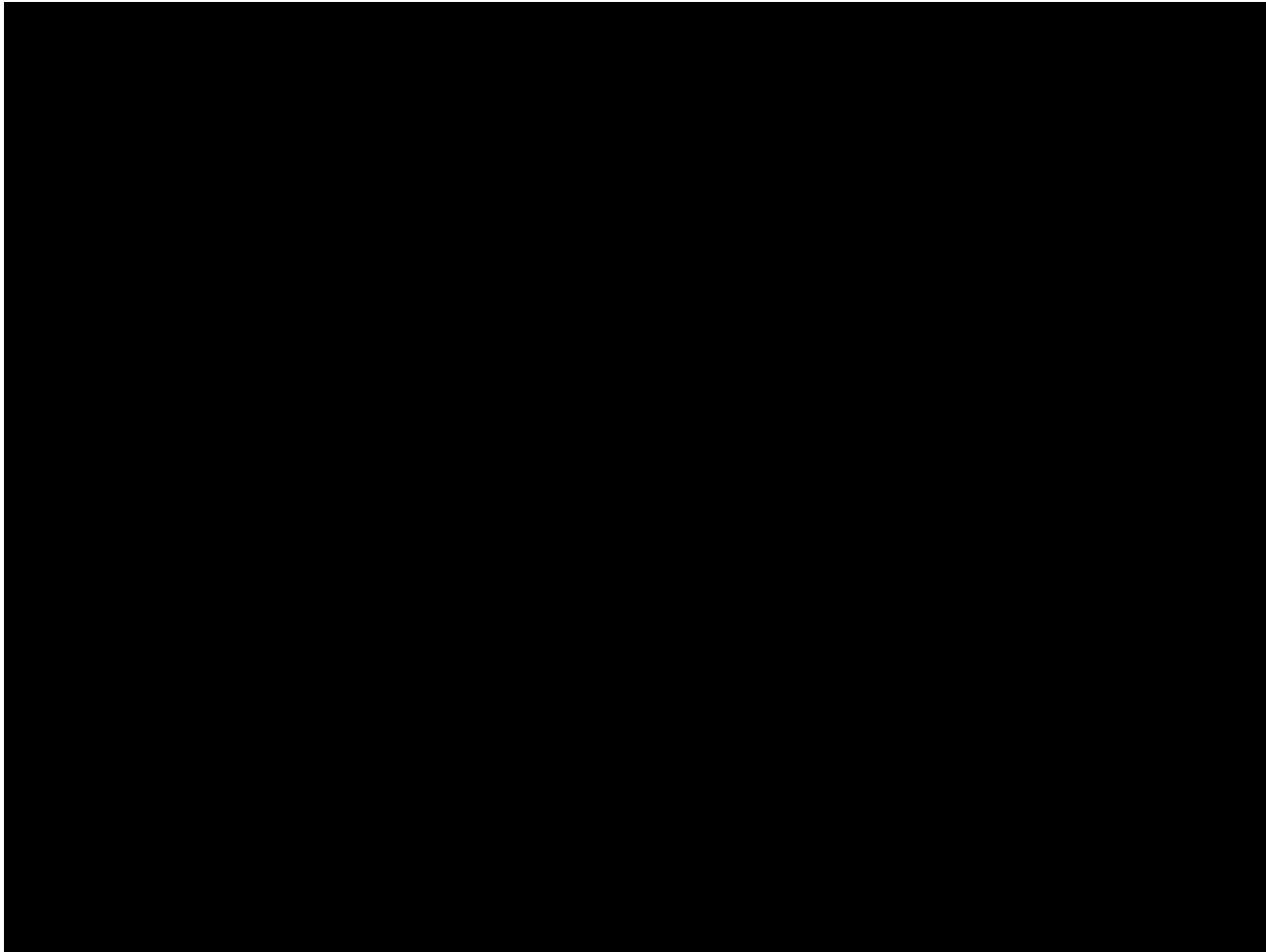


- £2M Share issue launched 15<sup>th</sup> December
- Expect to start digging March
- 13 core routes to link village nodes together
- First 40Km of duct early summer 2012
  - 500 premises passed
- End 2012 early 2013 complete digging
  - ~2500 premises passed
  - 420Km of duct, 36183Km of fibre to install
- Connections done as we pass property

# Project Management



- Lots of enthusiastic volunteers
- Lots of individual land owners doing their own bit
- Dozens? Hundreds? All working on their own small bit of the project
- Each bit is low tech
- BUT added together we get something special





# Broadband for the Rural North Ltd

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# Membership



- Minimum investment is £100
- Maximum investment is £20,000
- These are per person limits
- Mutual Society so 1 member 1 vote
- From year 4 can apply to withdraw investment
- Remains a member so long as £100 remains
- If all shares withdrawn ceases to be a member
- No longer able to vote and determine policy of B4RN



# Funding the build out



- Cost to build network = £2.6M
- Cost of Materials = £1.6M (61%)
- Cost of Labour = £1M (39%)
- Issue 2,000,000 shares of £1 face value
- Max allowed under EIS rules for 2010/11
- Two types
  - “A” anyone can buy these
  - “B” only available for those doing work on project

# Type “A” shares



- 1,500,000 Type “A” shares
  - available to anyone who wants to buy them
  - Minimum subscription is £100
  - This makes you a member of B4RN and you get one vote
  - Buy £500 or more and you become eligible for EIS (Enterprise Investment Scheme)
  - tax relief 30% of the value of shares purchased

# Type “B” Shares



- We want to encourage members of the community to involve themselves in the network build
- We believe 90% of the labour element will be done by community volunteers
- So 500,000 “B” shares reserved for purchase by those doing work
- sweat rather than swag equity?
- This recognises volunteers efforts and allows them to build a long term stake in the project

# EIS



- Both “A” and “B” shares are the same for EIS relief purposes
- Purchasers of £500 or more of shares are eligible for EIS tax relief at 30%
- Scheme has been pre-approved by HMRC
- So long as your individual circumstances fit then you will get the tax relief
- Talk to your financial advisor if you have one
- If you want to claim EIS relief tick the box on the application form and we will send you the HMRC form needed

# Holding Shares 1



- Shares are withdrawable
  - You can only sell them back to B4RN
  - You cannot sell them to anyone else
- Shares must be held for 3 years to conform with EIS rules
  - Tax relief is paid immediately but if you sell the shares before the three years are up then HMRC will claw back the tax relief
- **B4RN rules do not permit withdrawals during first three years anyway**

# Holding Shares 2



- During the first three years no interest will be paid on the shares (but you did get the 30% EIS tax relief)
- In year 4 and after we aim to pay 5% interest annually
  - This is subject to B4RN having sufficient funds to meet the cost
  - Business plan shows that it will
  - But we cannot guarantee it!

# Holding Shares - 3



- All members get a shares account
  - Credited with number of shares bought
- Interest paid by adding shares of appropriate value to the account
- Member can apply to withdraw some or all of the shares from year 4 onwards
- Currently planning to set aside £200K/pa to meet withdrawal request
- Plus an amount equivalent to the 5% interest

# Incentives to Invest



- EIS 30% tax relief already covered
- Those investing £1500 or more
  - Can nominate a property that
  - will get a free connection worth £150
  - and a years free service worth £360
  - Total value £510
- Early investors (before 29<sup>th</sup> Feb 2012) get 15 months rather than 12 increasing the value to £600
- However be aware that HMRC will treat this as receiving value from B4RN and reduce the EIS tax relief accordingly.
- If you have one then discuss this with your financial advisor to ensure you get the best deal





# Thank you for coming

Barry Forde

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