Community Broadband Scotland Project

Ettrick and Beyond

Scoping Document

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Southern Uplands Partnership

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Ettrick and Beyond Scoping Document

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I need faster internet. It's a lifeline. I am disabled and housebound in a rural setting. No shops or services nearby.

I would love to run my business from home. Our service is so poor that I can only use it for emails.

I am unable to download films or watch catch up TV

I would like to be able to complete my tax return without the line failing!!!

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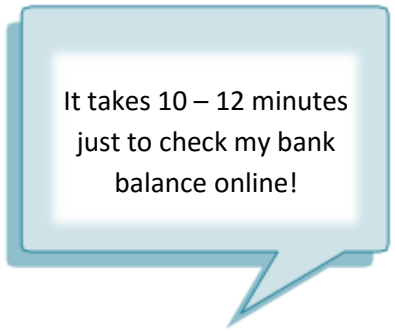

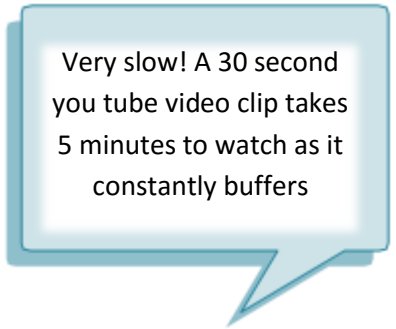

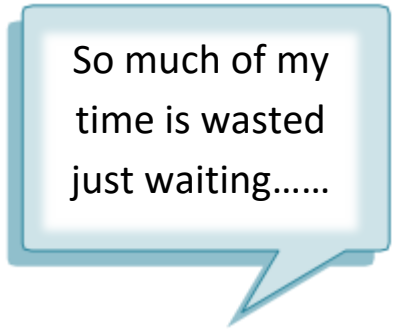

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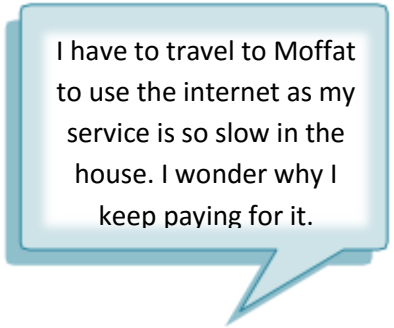
Front page photo courtesy of Our Scottish Borders – Talla Reservoir



Please note

The data contained within this document has been collected from a number of sources, some of which do not exactly correlate. I have therefore drawn some conclusions by “best fit” using the Ettrick and Beyond survey data, Newcastleton survey data, Census 2011, Scottish Neighbourhood Statistics, Scottish Assessors Association and Datazone information for both county council areas. Additional information has been provided by Forestry Commission Scotland, Scottish Borders Council, Dumfries and Galloway Council and the Crichton Institute. Publicly available statistics and datasets are not produced specifically for the geographies contained within this report. Therefore, the project area has been defined in a number of ways: Datazones: Areas of around 350 households (Scotland is split into 6,505 datazones). Postcode; there are 353 project area postcodes and 34 BT Commercial Area postcodes which have been combined into 16 postcode groups. Community Council Boundaries; 16 community council areas lie within the project as outlined. Exchange; the project area is served by 29 BT Exchanges.

Section 1

Project Introduction

Towards the end of 2014, various community and charitable organisations in the Scottish Borders and Dumfries and Galloway approached Community Broadband Scotland to seek help with their rural broadband issues. In early 2015 community members from Ettrick and Yarrow Community Development Company, Glen Estate, Lilliesleaf, Ashkirk and Midlem Community Council, Borthwick Water Community Development Trust, Upper Teviotdale and Borthwick Water Community Council, Eskdalemuir Hub, Newcastleton & District Community Council, Samye Ling Monastery and Tibetan Centre and Tweedsmuir Community Council came together to look at the possibility of an aggregated broadband project to deliver superfast broadband to their collective areas.

A survey of all areas was to be conducted to understand the various rural broadband issues and to be the first step towards finding a solution. (See appendix 11)

In June 2015, the Southern Uplands Partnership (SUP) was commissioned by Community Broadband Scotland (CBS) to undertake a survey of rural areas in the Scottish Borders and Dumfries and Galloway who may not be served by the current Digital Scotland Superfast Broadband programme being delivered through BT.

The five month project began in July 2015 and was to survey communities living in rural areas in the Scottish Borders and Dumfries and Galloway with the aim of forming an aggregated broadband project for these neighbouring communities.

The aim of the survey was to collate as much data as possible on current service, location of properties with poor provision and to determine desire for a better service so this could be used to explore the potential of a community lead initiative to deliver superfast broadband to rural areas. An online survey was prepared and various communities enlisted volunteers to undertake door to door surveys in Lilliesleaf, Midlem, Ettrick, Yarrow, Chesters, Minto, Ashiestiel, Peel, Tweedsmuir, Yair, Elibank, Traquair, Upper Teviotdale, Roberton and Glen.

A total of 8 articles appeared in the local press (Southern Reporter, Selkirk Weekend Advertiser, Peeblesshire News, Border Telegraph and Eskdale and Liddesdale Advertiser), news items and interviews aired on BBC Radio Scotland and TD1 Radio throughout the survey period and many community and third sector agencies highlighted the survey in their newsletters. Various websites featured the story and extensive work was undertaken on social media to reach communities within scope of the project. Local community email lists were utilised and 26 local councillors were contacted to ask that they forward the information to constituents. Half way through the survey 372 people who had supplied an email address were asked to forward the survey to a friend or neighbour to secure further responses. The project held two public meetings in Tweedsmuir and Teviothead both of which were well attended, and a further 9 meetings with community groups.

The survey completed at the end of September 2015 with 694 responses. A similar survey was undertaken for the community of Newcastleton by local volunteers with 90 responses. The data from both surveys has been collated in this document.

Figure 1 - Project Area: Ettrick and Beyond. Map courtesy of Forestry Commission Scotland

1. Local area information

The Ettrick and Beyond Project aggregate a large number of neighbouring rural communities in the Scottish Borders and Dumfries and Galloway. The project area is approximately 887 square miles most of which is given over to moorland, upland farms and forestry. Ettrick and Beyond encompasses 16 community council areas and 3,216 properties. There are a further 251 premises in BT Commercial Areas*.

The project is located in the south west of the Scottish Borders and lies on the eastern edge of Dumfries and Galloway. It is skirted in the north east by the A702, the A72 to the north, A68 in the east, the Scotland England border in the south east and the A74M in the west.

A number of settlements fall within the project boundary (Hawick, Ashkirk, Denholm, Ettrickbridge, Langholm, Canonbie and Bonchester Bridge) but are not included in the actual project. This document highlights the service issues of those living out with the areas listed above and the surrounding settlements of Ettrick, Yarrow, Cappercleuch, Moffat Water, Tweedsmuir, Roberton, Teviothead, Elibank, Peel, Yair, Minto, Cavers, Newcastleton, Old Castleton, Saughtree, Larriston, Bentpath, Castle O'er, Boreland and Eskdalemuir. The settlements of Traquair, Orchard Mains, Glen, Branxholm, Wilton, Groundistone, Clarilaw, Stobs Castle, Priesthaugh and Shankend are located within BT commercial Areas.

Whilst some areas lie close to local services, most of the projects residents live in isolated rural settings with no access to shops, restaurants, health care services, educational facilities or public transport. Mobile phone services are patchy with many 'not spots' particularly in the more remote areas. Fixed line broadband speeds range from 100 - 6,900 Kbps.

1.1 Communities defined by postcode

The Ettrick and Beyond project covered the following communities as defined by postcode area:

DG10 9	Moffat Water
DG11 2	Eskdalemuir and Boreland
DG13 0	Eskdalemuir and Bentpath
EH43 6	Elibank and Thornylee
ML12 6	Tweedsmuir
TD1 3	Ashiestiel, Peel, Williamhope, Fairnilee, Yair and Rink
TD6 0	Midlem
TD6 9	Midlem and area
TD7 4	Clerklands, Alewater and Whitmuir
TD7 5	Ettrick and Yarrow
TD8 6	Chesters and Belses
TD9 0	Teviothead, Newcastleton, Old Castleton and Hermitage
TD9 7	Borthwickbrae and Roberton
TD9 8	Cavers, Hassendean, Appletreehall, Bedrule and Minto
TD9 9	Wolfelee, Hobkirk and Stobs Castle

Some of the communities surveyed were later found to be in BT commercial areas. These were:

EH44 6	Traquair, Orchard Mains and Glen
TD9 0	Branxholm
TD9 7	Wilton and Groundistone
TD9 8	Clarilaw
TD9 9	Stobs Castle, Priesthaugh and Shankend

** Commercial area definition: Exchanges where BT has provided or plans to provide superfast broadband. Therefore these areas are out with Digital Scotland rollout and cannot be included in any project requiring state aid.*

Figure 2 – Table: Project Area by Exchange Name. Postcode areas do not exactly match community council boundaries. Therefore, the information that follows has been arranged by the exchange which serves each individual postcode.

Exchange Name	Postcode Groups within Exchange Area	Number of Project Postcodes for this Exchange	No. of Premises
Ancrum	TD8 6	4	68
Ashkirk	TD7 4 TD9 8	6	40
Bentpath	DG13 0	15	99
Biggar	ML12 6	2	36
Bonchester Bridge	TD9 8 TD9 9	24	164
Boreland	DG11 2	2	9
Borthwick Brae	TD9 7	21	116
Broughton	ML12 6	6	89
Cappercleuch	TD7 5	6	63
Clovenfords	TD1 3	10	102
Denholm	TD9 8	24	221
Eskdalemuir	DG11 2 DG13 0	16	164
Ettrick Bridge	TD7 5	6	28
Ettrick Valley	TD7 5 TD9 7	11	106
Galashiels	TD1 3	1	8
Hawick	TD9 7 TD9 8 TD9 9	17	154
Jedburgh	TD8 6	2	39
Langholm	DG13 0	1	3
Liddesdale	TD9 0	51	579
Lilliesleaf	TD6 9 TD7 4 TD8 6 TD9 8	24	248
Moffat	DG10 9	10	73
Selkirk	TD1 3 TD7 4 TD7 5	14	148
St Boswells	TD6 0 TD6 9	5	70
Steele Road	TD9 0 TD9 9	20	110
Stobo	ML12 6	1	28
Teviotdale	TD9 0	28	116
Tweedsmuir	ML12 6	6	99
Walkerburn	EH43 6	3	46
Yarrow	TD7 5	12	86
Yarrowford	TD7 5	5	104
Total		**353**	**3217**

Figure 3 – Table: BT Commercial Areas by exchange.

Exchange Name	Postcode Groups within Exchange Area	Number of Postcodes	Number of Premises
Innerleithen	EH44 6	10	92
Hawick	TD9 0 TD9 7 TD9 8 TD9 9	24	159
Total		**34**	**251**

1.2 Population and employment data by area

The project area is approximately 887 square miles and covers a population of 5,401 There are a further 390 residents within the in BT Commercial areas.

Figure 4 - Population, Number of Properties and Age Groups within D&G and SB Project Areas

Postcode Group	Population in postcode group	Number of Properties in postcode group	Number of population under 16	Number of Population Working	Number of Population Retired
DG10 9	143	73	18	78	47
DG11 2	34	22	5	19	10
DG13 0	403	253	63	236	104
EH43 6	82	46	12	56	14
ML12 6	430	252	85	273	72
TD1 3	213	111	36	135	42
TD6 0	38	21	5	23	10
TD6 9	312	185	56	182	74
TD7 4	361	184	58	216	87
TD7 5	786	462	91	469	226
TD8 6	245	123	37	136	72
TD9 0	1159	801	154	723	282
TD9 7	225	136	35	140	50
TD9 8	821	459	162	514	145
TD9 9	149	88	19	95	35
Total	**5401**	**3216**	**836**	**3295**	**1270**

Figure 5 - Population, Number of Properties and Age Groups within BT Commercial Postcodes

Postcode Group	Population in postcode group	Number of Properties in postcode group	Number of population under 16	Number of Population Working	Number of Population Retired
EH44 6	142	92	26	87	29
TD9 0	54	33	8	32	14
TD9 7	99	63	15	63	21
TD9 8	32	19	7	20	5
TD9 9	63	44	12	39	12
	390	**251**	**68**	**241**	**81**

Source: Scottish Neighbourhood Statistics, 2011 Census, Scottish Assessors Association

Figure 6 – Table: Percentage of population under 16, working and retired

	Under 16	Working Age	Retired
Scotland	17.1	63.0	25.3
D&G Average	16.1	58.6	25.3
D&G Project Area Average	14.8	57.4	27.7
SB Average	16.7	58.2	25.05
SB Project Area Average	15.5	61.4	23.0
Commercial Area Average	17.4	61.7	20.7

Source: Scottish Neighbourhood Statistics

Employment by sector

Main areas of employment across all areas are agriculture, forestry, tourism and professional support services which are reflected by the types of business operating within the project boundary.

Figure 7 - Table: Percentage of population working in each industry by postcode area – see list below chart for industry type – National, County Council, Project and BT Commercial postcodes.

	1	2	3	4	5	6	7	8	9
Scotland	5.0	7.7	8.0	21.2	6.3	7.2	9.5	30.4	4.9
SB	11.0	8.0	8.5	20.0	5.7	4.4	8.4	29.8	5.2
D&G	11.0	8.4	8.7	22.3	6.8	2.5	6.5	29.6	4.3
DG10 9	4.1	8.3	9.3	19.3	5.1	4.2	7.1	36.8	5.7
DG11 2	3.8	12.1	9.0	19.4	5.1	3.2	6.3	31.9	4.2
DG13 0	10.7	11.6	8.5	22.1	4.0	3.1	7.4	28.0	4.6
EH43 6	5.9	7.7	10.6	22.8	6.6	4.4	9.5	25.8	7.1
EH44 6	5.9	6.1	9.6	19.3	6.4	6.3	7.8	32.7	5.6
ML12 6	16.1	4.6	5.5	12.3	6.1	5.6	12.1	28.1	9.6
TD1 3	2.7	15.8	10.0	23.0	3.0	7.9	8.1	25.4	4.3
TD6 0	6.0	5.6	9.5	19.2	6.2	3.8	9.1	36.7	4.0
TD6 9	6.7	4.3	6.3	16.8	6.1	5.1	10.4	39.9	5.0
TD7 4	6.6	7.1	9.4	19.9	3.7	4.8	9.9	33.7	5.6
TD7 5	9.9	7.0	7.0	19.9	4.6	4.2	10.0	31.9	5.7
TD8 6	9.8	13.0	12.1	19.2	5.2	2.7	6.3	26.0	5.9
TD9 0	18.4	5.8	9.6	18.8	4.9	2.7	6.5	26.0	6.1
TD9 7	16.0	9.6	8.1	19.6	4.0	2.4	6.2	28.7	5.3
TD9 8	17.2	7.8	8.4	22.0	3.9	2.2	7.0	26.7	4.9
TD9 9	15.2	7.8	9.5	21.4	4.5	2.8	6.6	27.5	5.0

1. Agriculture, Energy and Water

2. Manufacturing

3. Construction

4. Wholesale, Retail, Transport Storage and Real Estate

5. Accommodation and Food Services

6. Finance, Insurance and Communications

7. Professional, Scientific and Administrative Support Services

8. Public Administration, Education and Health

9. Other

Source: 2011 Census. Dataset extract - figures calculated to 1 decimal place so lines may not add to 100

1.3 Local services by area

As this is rural area project there are very few local services on offer.

Sparse public transport services and poor connections to other routes make it difficult for residents to study or work out with their immediate areas without a car.

The majority of nursery, primary and secondary school students are bussed to their local town as services are very limited. The nearest colleges are in Dumfries, Hawick and Galashiels.

Except for Newcastleton, there are no health centres, libraries or police stations in any of the project areas. Rural residents have to drive to their nearest town (some up to 18 miles) to access health care and emergencies health care can be up to 25 miles away.

Each community has access to a public hall and church facilities

Figure 8 - Table: Available Services

Service	Project Area	Commercial Area
Churches	**17**	**4**
Primary Schools	**3**	**0**
Public Halls	**20**	**2**
Nursery Provision	**1**	**0**
Libraries	**1**	**0**
Police Stations	**1**	**0**

Health Centres	**1**	**0**
Burial Grounds	**17**	**1**
Public Transport	**7***	**0**

*7 scheduled services. 2 limited service routes operating at term times or seasonally plus some demand response taxi and community bus services. On school routes transportation is provided during term times but leaves early in the morning and returns in the afternoon.

1.4 Social cohesion and future need of essential service

In the last ten years we have witnessed a huge increase in the bandwidth required to access webpages and as website development becomes more sophisticated this can only rise. As the world moves into an age of ever faster communications, the gap between these rural communities and the outside world grows ever greater.

Year on year, more services are being transferred to the internet or being accessed via the internet by consumers: VAT returns, self-assessment, agricultural payments, banking (many rural, town and city branches are closing) energy, food and retail shopping. Live and catch up TV, video rental via download and video calling for both business and personal use. Most colleges and universities now expect students to submit work online and businesses employ many remote workers. People with slow internet connections (some within the project area are still on dial up speeds) are unable to access these services and feel they are being marginalised.

Consumer's expectations of down and up load speeds have been significantly raised with the introduction of more portable devices and external apps like smart phones, tablets and cloud storage. Multiple household members expect to access the net simultaneously and all their devices are passively using a connection to update programs and apps.

The internet has become an essential service and as we move into the future it is likely that health care, benefit applications and payments, education and elderly care services will move online. Without superfast broadband, those living in remote and rural areas will be excluded because of restrictions in available technology and the high costs required in providing those services.

1.5 Economic growth/businesses

Superfast broadband brings genuine advantages for business by enhancing the potential for economic growth. The ability to access clients not just at a local level but globally has allowed companies to rapidly expand. Market leaders like eBay, Amazon and Facebook all started out with just an idea and an internet connection. Superfast enables higher productivity rates and increased access to supply chains which all translate into better value for consumers and higher profit potential for business.

In rural areas, superfast enhances a community's ability to attract and keep new business which is vital to the health and longevity of those communities. New business or expansion of existing businesses can benefit residents through local job creation, training opportunities and generation of business support services.

Within the project area there are at least 651 existing businesses and a further 60 in BT Commercial areas. Every business feeds the local economy in some way and is therefore vital to the sustainability of these rural areas.

Figure 9 -Table: Business Types within Project and Commercial Areas

Business Type	Project Area	Commercial Area
Agriculture	147	15
Accommodation Providers	136	12
Workshop/Office	28	8
Stables, Kennels and Catteries	13	5
Vacant Premises	30	4
Business Premises	17	0
Exhibitions	10	2
Sport / Leisure	44	2
Shops	13	1
Store Rooms	14	0
Business Services	131	8
Other	27	2

Main industries are agriculture, tourism, business services and forestry. The area has higher than average forest cover* and there are a number of forest management

companies successfully operating including Tilhill, Kronospan, Scottish Woodlands, Forestry Commission Scotland, Forest Enterprise and Forest Direct.

Key businesses in the project area: Buccleuch Estates, Samye Ling Tibetan Centre, Eskdalemuir Hub, Bowhill House, Honey Cottage and Angecroft Caravan Parks and Philiphaugh Estate. Key businesses in the commercial area: Traquair House.

The business list has been compiled using various data searches through Scottish Assessors Association, Companies House, Internet searches for each postcode and local area information from Community Councils and Community Groups. The project requested business lists from both Local Councils and Business Gateway but this information was not readily available. There was not enough time to make an FOI request to HMRC.

*Forest Cover Averages: Scotland 17%, Scottish Borders 18.5%, Dumfries and Galloway 26.8%, Ettrick and Beyond Project area 30% (source: FCS 2015, Scottish Borders Woodland Strategy 2005)

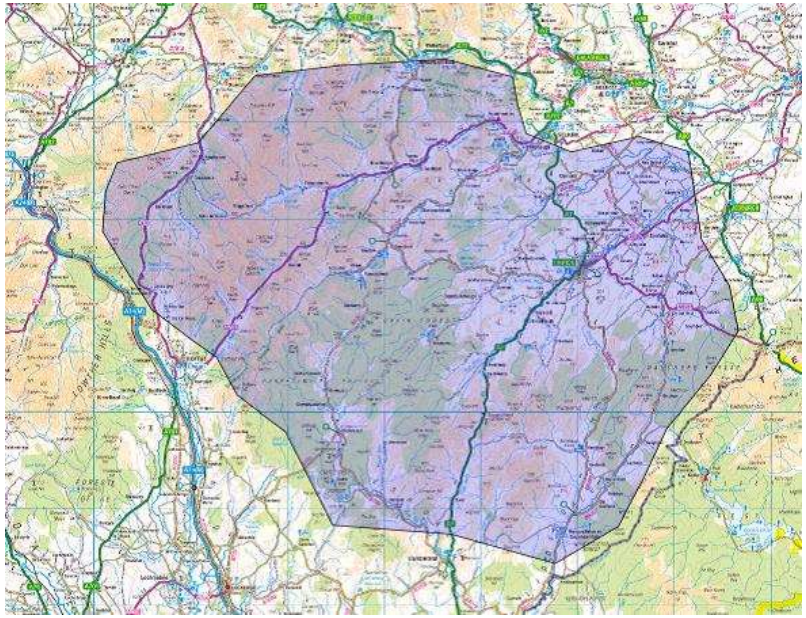


Figure 10 - Map outlining project area and forest cover. Map courtesy of Forestry Commission Scotland. See appendix 9 for full scale map

1.6 Previous projects

1.6.1 Upper Ettrick

In 2011 Scottish Borders LEADER approved an application from the upper Ettrick community to assist then in finding a solution to speeds below 2 Mb. In July 2012, BET technology was coupled to the Ettrick exchange. The technology has been used by 16 households since installation with varying degrees of success.

BET Technology Explanation from BT Openreach *"Broadband Enabling Technology (BET) has been developed by Openreach to provide broadband services to locations that currently have no connection or have very limited speeds due to the distance they are from the local exchange. BET provides 1Mbit/s or 2Mbit/s broadband services over lines much longer than has previously been possible" BET – BT Openreach*

In 2013 the Ettrick and Yarrow Community Development Company approached CBS to assist them with a project in the upper Ettrick. A door to door survey of 56 households and local businesses was undertaken with 62 responses. A technical study to assess the types of technology that may be available was commissioned and 8 technical evaluations were received by August of 2013.

Ettrick and Yarrow Broadband Technical Options Appraisal April 2014

CBS funded a Technical Options appraisal for the Ettrick and Yarrow Valleys which was undertaken by Farrpoint and published in April 2014. This report presented a number of technical options that have been identified following a site survey of the area to check potential assets, routes and delivery options. The analysis included budgetary costs for each option and considered the implementation, support and ongoing development of the network.

From this report it was concluded that such a project at the time was not financially and commercially viable due to a combination of reasons including availability of affordable local backhaul potential capital costs, difficulty in attracting a commercial ISP and the long term sustainability due to the low number of potential subscribers.

However the report did recommend consideration of an aggregated community broadband project as follows:

"CBS is currently investigating the scope for aggregating areas into a larger community broadband project with a view to capturing sufficient number of premises to be able to attract the interest of commercial Internet Service Providers (ISP) to deliver Next Generation Broadband (NGB) services. The options considered in this report are for delivering to the Ettrick and Yarrow valleys only, however there may be potential advantage in aggregating the surrounding areas into a larger community broadband project. The topography of the area and distribution of the communities and premises forming the aggregated project would need to be fully considered in a follow up study to ensure that the economies of scale offered by an aggregated model could be realised." Farrpoint Ettrick and Yarrow Broadband Technical Options Appraisal.

1.6.2 Lilliesleaf, Ashkirk, Midlem,

Lilliesleaf, Ashkirk and Midlem Community Council (LAMCC) contacted CBS early in 2014 to discuss their broadband issues. After some consultation the community agreed to undertake a broadband and mobile phone coverage survey of 380 household. Survey responses were returned from 136 (36%) households. LAMCC produced a report in January of 2015 which was submitted to CBS. After discussions with the community it was agreed that LAMCC would look at joining other communities in an aggregated project.

1.6.3 Clovenfords and other communities

A community owned and run website, Clovenfords.net issued an online survey earlier this year to encourage residents to record their broadband speeds after the village was fibre enabled. They are aware that many people out with Clovenfords are served by the same exchange but are experiencing very slow speeds. To date, the online survey has 17 responses.

CBS were also contacted by Glen Estate, Borthwick Water Community Development Trust, Upper Teviot and Borthwick Water Community Council, Esdalemuir Hub and Samye Ling Centre. Once the Ettrick and Beyond survey went online a number of communities approached the project to be included: Upper Liddesdale and Hermitage Community Council and representatives from Chesters, Minto and Hassendean.

Section 2

2. Communication services information

2.1.1 Existing broadband services

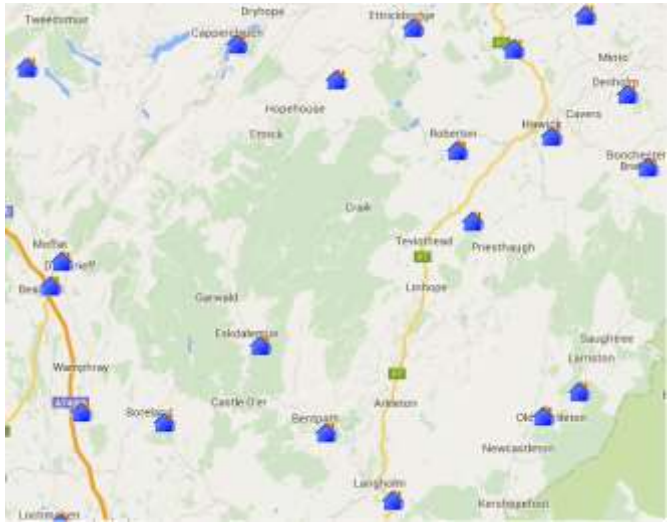


Figure 11 – Map: BT Exchanges within scope of the project. www.samknows.com. A full list of exchange services can be found in section 2.2

The project and commercial areas are served by a variety of exchanges (as shown above) offering a variety of broadband services. All are classed as Market 1 as BT are the only service provider available.

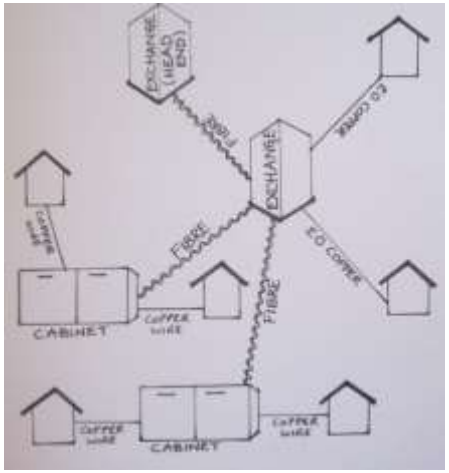


Figure 12 – Schematic: FTTC and 'Exchange Only' Lines. See Appendix 16 for larger version

Exchanges in the larger conurbations of Galashiels, Hawick, Selkirk, Innerleithen, Jedburgh, Moffat and St Boswells are linked to BT roadside cabinets which have been fibre enabled and provide Fibre To The Cabinet (FTTC) broadband services. The remainder of the exchanges in the project area predominantly offer ADSL (Asymmetric Digital Subscriber Line) broadband services offering speeds of up to 8Mbps. Some of these exchange areas are being or planned for upgrade to provide a FTTC fibre capability through the Digital Scotland Superfast Broadband (DSSB) project as shown in Appendix 10.

The exchanges at Cappercleuch and Bortwickbrae use Exchange Activate technology which only provides a maximum broadband speed of 0.5Mbs. The exchanges at Cappercleuch, Ettrick Valley, Tweedsmuir, Yarrow and Eskdalemuir have a status of Exploring Solutions in the DSSB's current plan which indicates that these areas are unlikely to be upgraded to fibre.

Many residents in the project area are directly connected to the exchange rather than through a green street cabinet (as shown in the diagram to the left) – these are called "Exchange Only" lines. It can prove more challenging and time-consuming to bring fibre broadband to properties served by EO lines. EO lines are included in the roll out for DSSB. The solution used to provide fast fibre broadband may, however, vary from exchange to exchange. For example, a new cabinet may be installed to provide fibre to cabinet technology or a fibre may be provided direct to premises, known as fibre to the premises (FTTP).

However many residents in the project area serviced by EO lines, or through existing or new cabinets may continue to experience poor broadband speeds because of their distance from the cabinet as shown in the graph below.

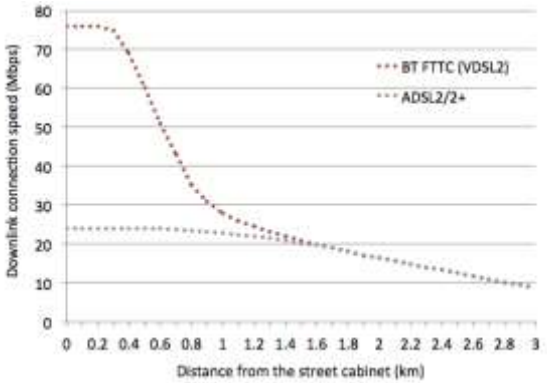


Figure 13 - Graph: Copper wire signal carrying capacity decreases as distance increases

Source:http://www.increasebroadbandspeed.co.uk/graph-ADSL-speed-versus-line-loss-distance

2.1.2 Satellite

Satellite Broadband is potentially available to all residents and businesses in the area with service speeds of up to 20Mbps (Megabits per second) being available from the latest Eutelsat KA-SAT, SES ASTRA and Avanti HYLAS satellites.

Satellite usage allowances tend to be quite restrictive and can easily attract hefty excessive use charges by exceeding the limit and maybe slow due to latency. Of the satellite users (39) who completed the survey most reported problems with service disruption and high running costs.

Those postcodes eligible within the project area can be found at

http://better-broadband.co.uk/who-is-eligible/

Figure 14 –Screen captures: Satellite Broadband Eligibility Maps for SB and D&G www.better-broadband.co.uk

Further satellite information can be found in section 2.4.2

2.1.3 Mobile

Mobile broadband is potentially available to all residents and businesses in the area. However, there is limited network coverage with no 2G voice or 3G data services from any of the Mobile Network Operators within the project footprint. Residents and businesses may not benefit from 4G services apart from the Lilliesleaf and Ettrick Bridge which are part of the government-backed scheme called the Mobile Infrastructure Project (MIP).

Expected mobile broadband speeds where available:

* 2G – 14.4Kbps to 236Kbps

* 3G – 384Kbps to 100Mbps

* 4G – 1Gbps

Of the 784 responses to the surveys just 3 people reported using mobile networks to access the internet as this type of connection is not a viable option for those within the project footprint.

See section 2.3 Network Coverage for maps that show the scale of the problem.

2.2 BT exchange information

Name	Location	Residential (cotlan.)	Non Residential (cotlan.)	Current Services
Ancrum (ESANC)	TD86XB	291	38	ADSL
Ashkirk (ESASH)	TD74NU	126	19	ADSL
Bentpath (WSBEN)	DG130PB	91	6	ADSL
Biggar (WSBIG)	ML126AD	1472	115	ADSL, LLU
Boreland (WSBOR)		156	8	ADSL
Bonchester Bridge (ESBBE)	TD98JJ	281	21	ADSL
Borthwickbrae (ESBOR)	TD97LY	79	10	ADSL, Exchange Activate
Broughton (WSBRO)	ML126HQ	292	31	ADSL
Cappercleuch (ESPAC)	TD75LG	40	12	ADSL, Exchange Activate
Clovenfords (ESCLF)	TD13NA	379	12	ADSL FTTC available in some areas
Denholm (ESDEM)	TD98NS	557	25	ADSL
Eskdalemuir (WSESK)	DG130QH	118	11	ADSL
Ettrick Bridge (ESETB)	TD75JL	97	16	ADSL FTTC available in some areas
Ettrick Valley (ESETV)	TD75HS	65	23	ADSL
Galashiels (ESGAL)	TD11SW	7300	525	ADSL, LLU, 21CN WBC : and FTTC available in some areas
Hawick (ESHAW)	TD99RD	7854	389	ADSL, LLU, 21CN WBC FTTC and FTTP available in some areas
Innerleithen (ESINN)	ESINN	1,876	80	ADSL, LLU, FTTC available in some areas
Liddesdale (WSLID)	TD90RU	516	40	ADSL
Jedburgh (ESJED)	TD86EA	2300	208	ADSL, LLU, 21CN WBC
Langholm (WSLAH)	DG130EA	1309	95	ADSL, LLU
Lilliesleaf (ESLIL)	TD69HX	290	38	ADSL
Moffat (WSMOF)	DG109EL	1472	117	ADSL, LLU, FTTC available in some areas
Selkirk (ESSEL)	TD74DS	3030	264	ADSL, LLU, 21CN WBC : FTTC and FTTP available in some areas
St Boswells (ESSTB)	TD60PL	1844	154	ADSL, LLU, : FTTC and FTTP available in some areas
Steele Road (WSSTD)	TD90SQ	75	17	ADSL
Teviotdale (ESTEV)	TD90LE	114	14	ADSL
Tweedsmuir (WSTWE)	ML126QN	71	13	ADSL
Walkerburn (ESWAL)	EH436AP	452	14	ADSL
Yarrowford (ESYRF)	TD75NA	74	7	ADSL

Figure 15 – Table: BT Exchange Information

Source https://www.samknows.com/broadband/exchange_mapping

2.3 Mobile network coverage

Within much of the project area there is little or no network coverage from any of the Mobile Network operators. Lack of signal and many 'not spots' mean that mobile broadband is not a viable option. The screen captures below from the Ofcom Mobile Coverage Checker site (purely for voice calls) where the blue indicator is centred on Ettrick shows the range of the issues faced by those living and working within the area.

Legend: Amber – may experience problems, Red – unlikely to get a signal, White – should not expect to get a signal.

Much of the area is also lacking in 3G data services and will potentially not benefit from any 4G service. Larger scale maps can be found in Appendix 15

http://www.ofcom.org.uk/mobile-coverage

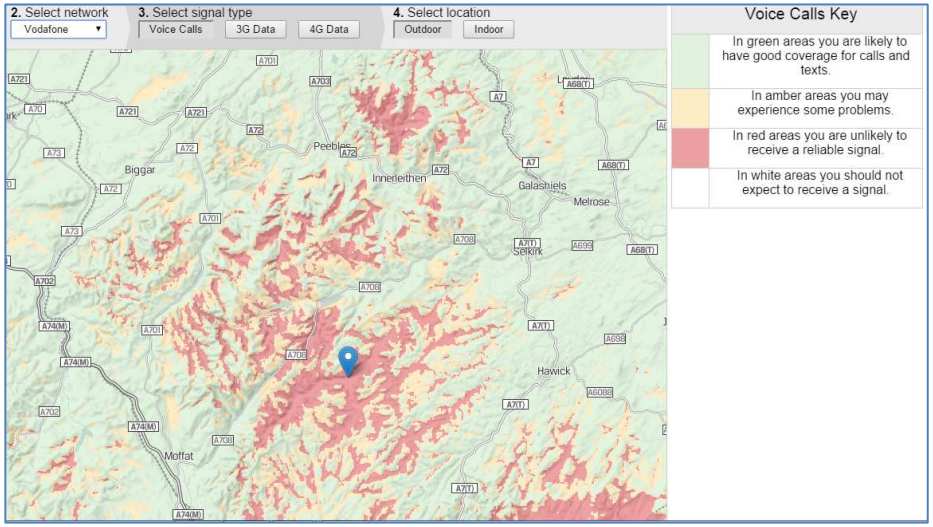


Figure 16 – Screen Capture: Vodaphone Network Coverage

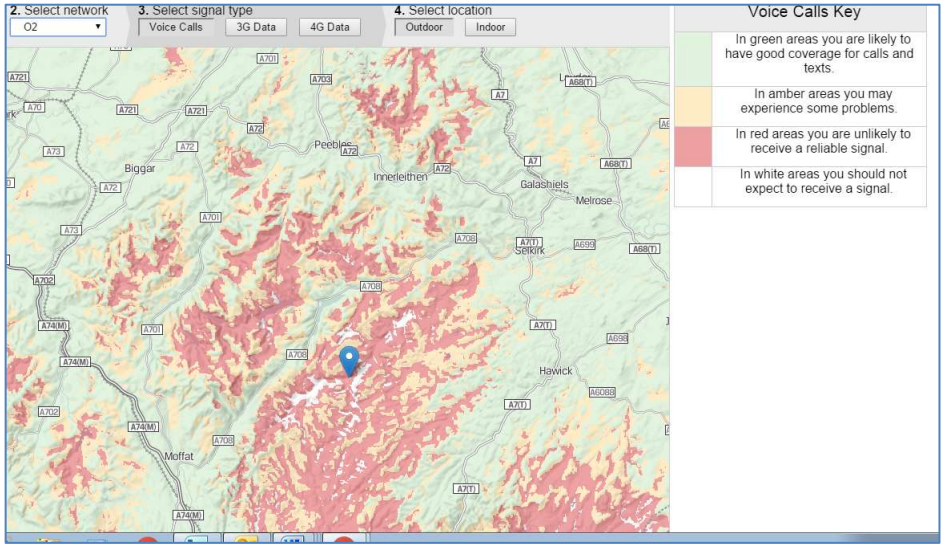


Figure 17 – Screen Capture: O2 Network Coverage

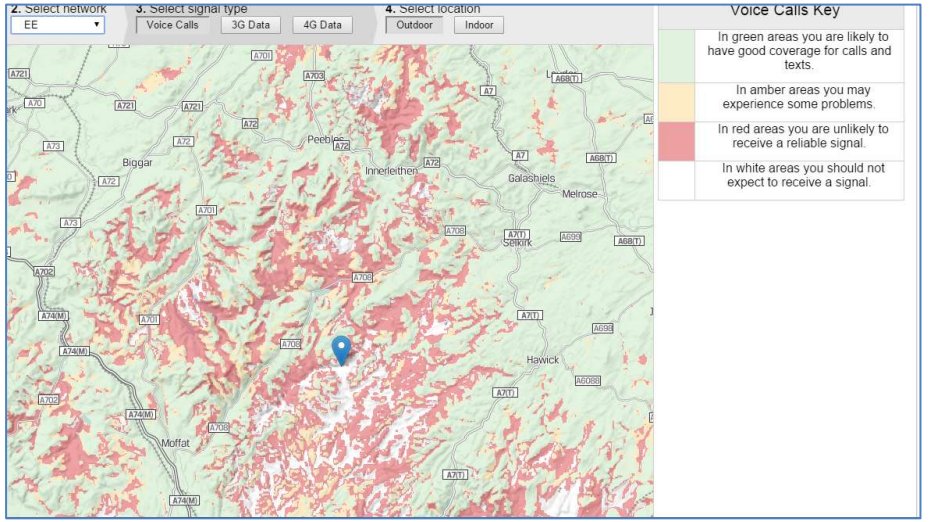


Figure 18 - Screen Capture: EE Network Coverage

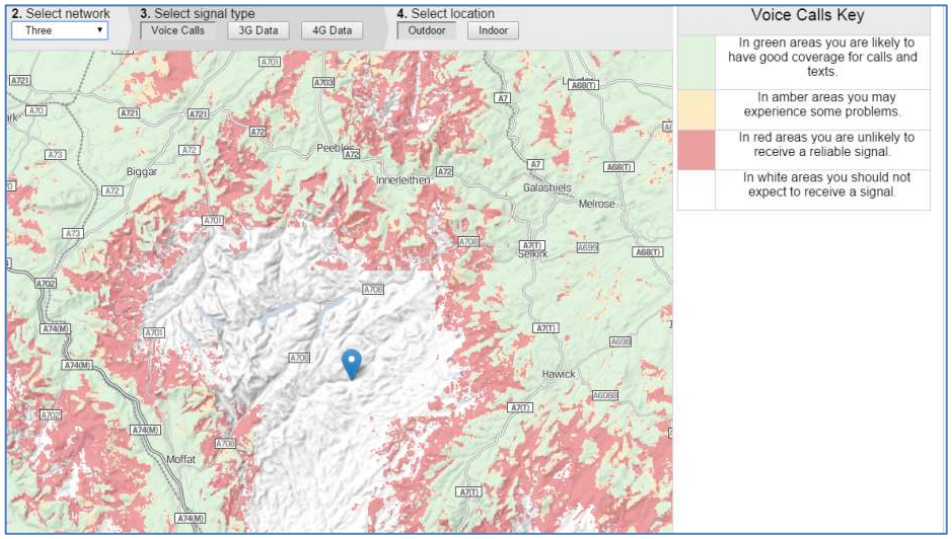
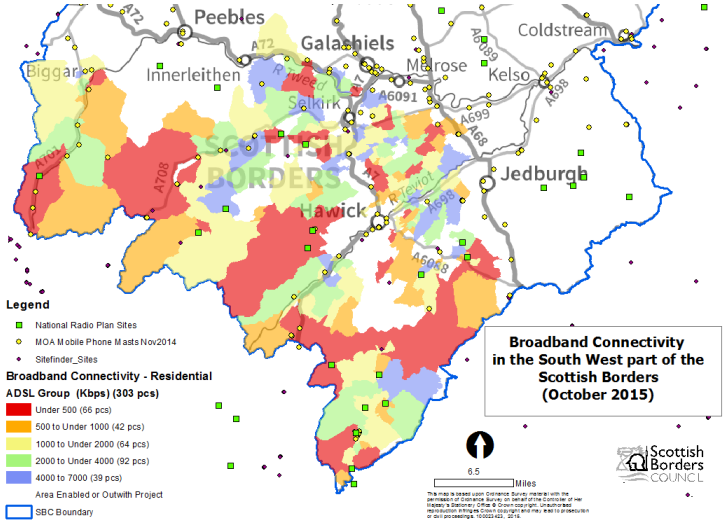


Figure 19 – Screen Capture: Three Network Coverage

2.3.1 Location of Mobile Masts

Figure 20 – Mobile mast sites Scottish Borders. A full scale version of this map can be found in appendix 4



Both Scottish Borders and Dumfries and Galloway Councils kindly provided mobile network coverage maps which highlight the extent of the connectivity problems for those within the project footprint.

Low population and rolling upland terrain equates to these areas being hard to reach as is reflected in the number of mobile masts and network coverage as shown in section 2.3

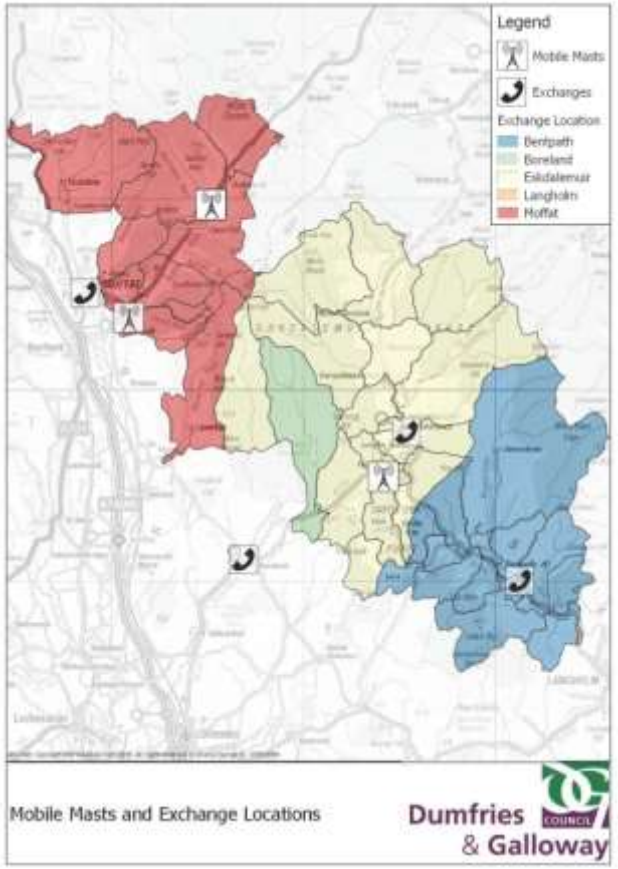


Figure 21 – Map: Mobile mast and BT Exchange Locations in D&G Project area. A full scale version can be found in appendix 1

2.4 Other potential

2.4.1 SWAN network

"The Scottish Wide Area Network (SWAN) is a Scottish Government led programme in partnership with the wider public sector. Capita through the, SWAN Framework Agreement has committed to deliver a number of community benefits. One such benefit is that SWAN will develop a 'Public Access Service' that (amongst other things) can provide community schemes connectivity and backhaul to the SWAN Internet Transit Service and therefore act as the communities Internet Service Provider (ISP)."
www.gov.scot/topics/digital

CBS, the Scottish Government, Scottish Borders and Dumfries & Galloway Councils are currently exploring how SWAN may be used by community-led broadband projects to deliver Broadband services into underserved areas.

Further information can be found at https://www.scottishwan.com/Pages/default.aspx

Towards the end of the project we were contacted by Updata Infrastructure who is supplying the SWAN Network to regional councils. They have a potential issue with connecting Yarrow Primary School and wanted to let us know that if a community scheme were in place they would likely purchase services to connect the school.

Message from David Bennet, SWAN Commercial Manager, Updata Infrastructure.

"Scottish Borders Council are moving onto the Scottish Wide Area Network as part of their efforts to improve broadband services and improve purchasing efficiency. As the SWAN provider we are looking for a practical solution to provide a broadband connection to Yarrow Primary School.

The current broadband provider for this site uses PPC technology, which has been superseded by Fibre to the Cabinet access. Many providers are moving out of the PPC market and decommissioning the equipment required to serve PPC customers as the market for these service reduces. It is possible that the school is may have difficulty obtaining an acceptable broadband service in future if, as seems likely, it is not covered by the Superfast Broadband roll-out.

We would be very interested in purchasing broadband services from a community-based broadband provider in the future. We are operating a similar model in the Highlands and Islands and expect it to be an excellent win-win for all stakeholders."

2.4.2 Avanti Satellite

Avanti is working with BDUK (Broadband Delivery UK) on a pilot project which aims to enable high speed Broadband services to be made available in areas within Northern Ireland and Scotland including areas within Scottish Border and Dumfries and Galloway. BDUK involvement means that prices for the kit, installation and monthly tariffs have been greatly reduced, resulting in broadband which is in line with terrestrial broadband pricing, therefore, more accessible to a wider range of rural households and businesses

****NEWS 7th December 2015*****

Universal Broadband Contract

It has just been announced that the government are planning to issue those with connections speeds of 2Mb and under, up to £350 towards a satellite dish and the first year's connection fees. It was not possible to find further details of where and when the rollout will begin at this time

December 07, 2015 10:02 AM Eastern Standard Time
http://www.businesswire.com/news/home/20151207005889/en/Avanti-Communications-UK-Universal-Broadband

"LONDON–(BUSINESS WIRE)–Avanti Communications Group plc announces a new contract with BT, to be part of BT's supply of wholesale consumer broadband services which will be sold onwards to consumers in the UK through a network of satellite resellers under the auspices of the British Government's Universal Service Commitment.

Under this plan directed by Broadband Delivery UK ("BDUK"), up to 300,000 homes which cannot access greater than 2Mbps from terrestrial networks will be eligible to receive a contribution from government to fund the installation of satellite broadband services, with the consumer then paying monthly service charges. The scheme is expected to go live during December.

David Williams, Chief Executive of Avanti said: "We welcome this significant intervention by government to ensure that the Universal Service Commitment is met and we are pleased to serve the best interests of the UK consumer."

Ed Vaizey MP, Digital Economy Minister said: "Our rollout of superfast broadband has already reached an additional 3.5 million homes and businesses who would otherwise have missed out. We are making tremendous progress, but it's a massive engineering project and won't happen overnight. This scheme offers immediate assistance to those homes and businesses in the most remote areas with the slowest speeds and is all part of our transformation of the UK's digital landscape."

Section 3 Local broadband landscape

3.1 Survey

An online survey was developed with the assistance of community volunteers and went live in July 2015. To reach the target areas the project contacted local press and media, community councils, third sector agencies and projects working in the defined areas, local councillors, local community email lists, posters and public meetings. Various local websites featured the story and extensive work was undertaken on social media to reach communities within scope of the project. Community volunteers delivered fliers door to door in Roberton, Tweedsmuir, Ettrick, Yarrow, Midlem, Ashkirk, Lilliesleaf, Minto, Traquiar, Glen, Elibank, Peel, Ashielstiel, Yair and Cappercleuch. Half ways through the survey, all respondents (372) were emailed to ask if they would forward the link to neighbours and friends within their community.

In Newcastleton, local volunteers set up a similar online survey for residents of the village and surrounds. The Newcastleton survey received 90 responses.

Representatives from each community were emailed weekly with survey results to encourage them to keep up the momentum and inform residents of progress.

We targeted 3,468 residential and business premises and had an overall response rate of 22.05% from target postcodes.

3.1.1 Overview

784 responses received

624 (79.6%) from target postcodes

41(5.2%) from BT Commercial Areas

93 (11.8%) from target postcode groups but not in project area

7 (0.9%) no address given

19 (2.4%) outside area

770 (98.2%) completed online

14(1.7%) by paper copy or telephone

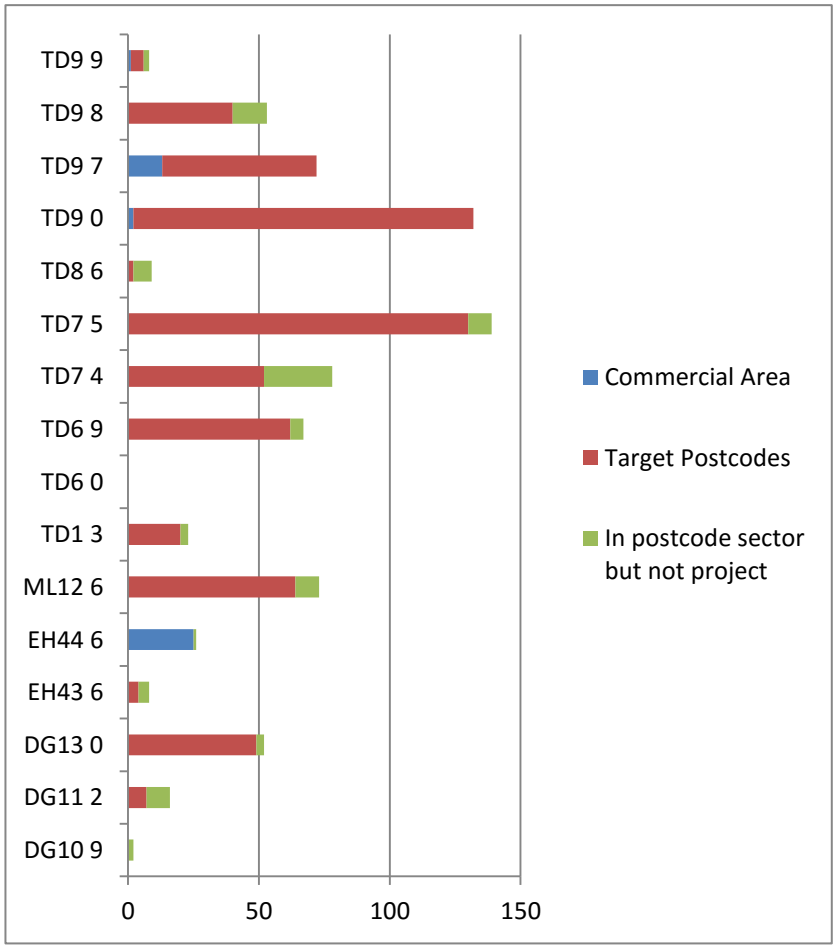
586 (74.7%) provided contact details and wished to be kept informed of progress

757 (96.5%) came from people who currently access a broadband service

552 (70.5%) reported that they were dissatisfied with their current service

3.1.2 Responses by area

Figure 22 – Chart: Responses by postcode from commercial area, project area and postcode groups just outside project boundary. Sample Size: 758 (624 project area, 41 commercial, 93 in target postcode groups)



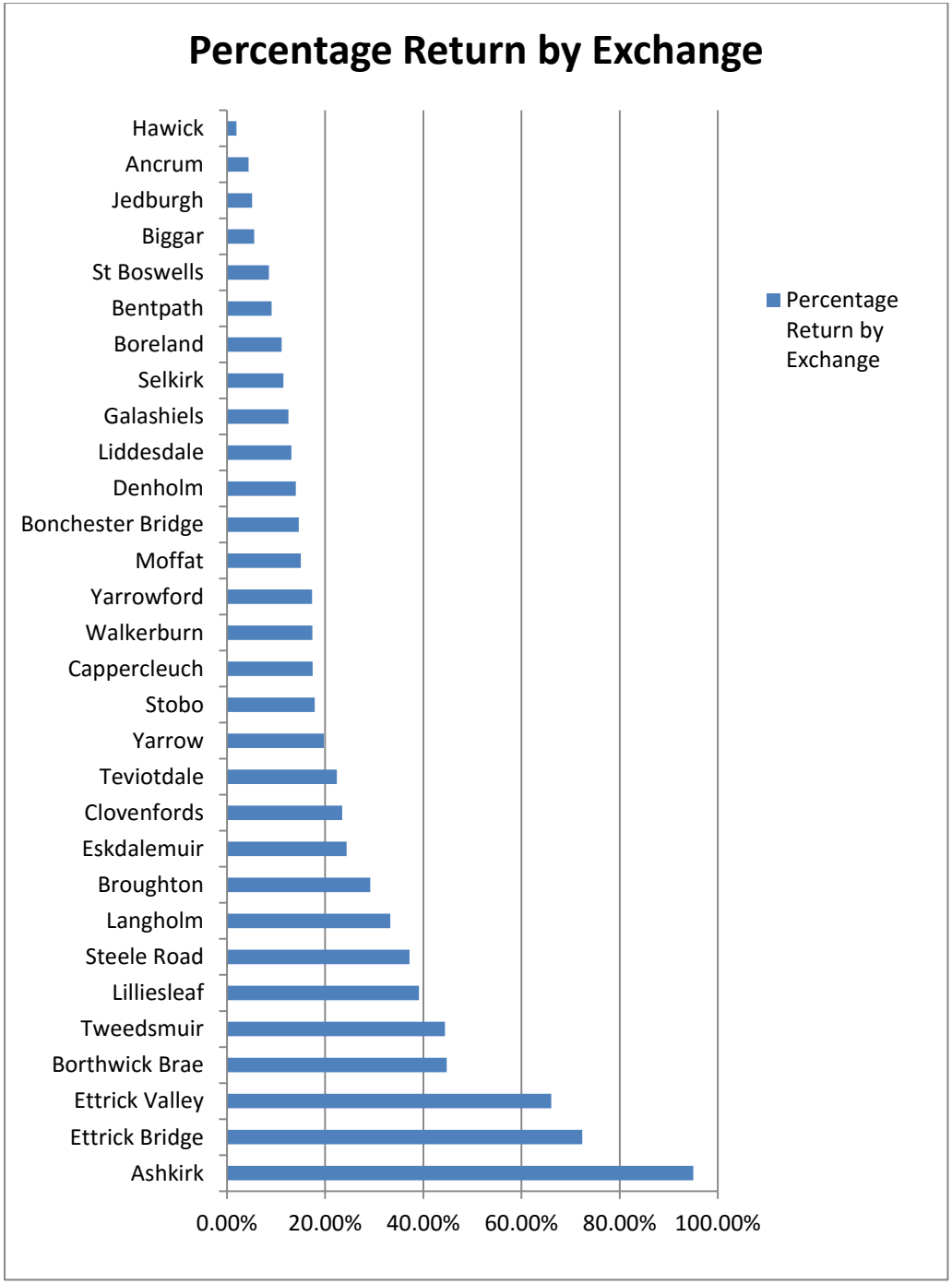


Figure 23 - Chart: Percentage Return by Exchange. Sample Size 724

3.2 Speed and connection

3.2.1 No service

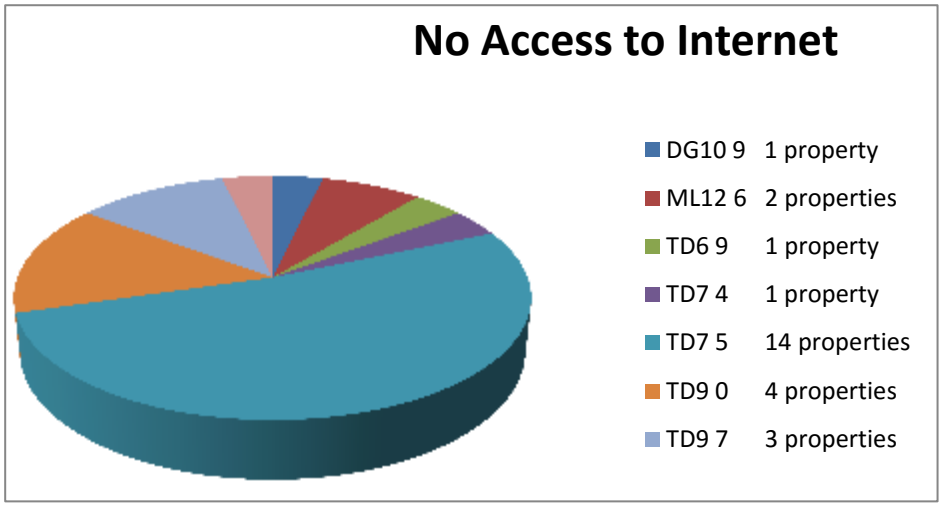


Figure 24 – Chart: No access to Internet

27 (3.4%) respondents within the project footprint reported that they had no access to the internet by any means. Three of them called the project from a neighbour's phone, 11 posted in a paper response and the remainder used a friend's broadband to complete online.

Users report that they are either too far from the exchange (up to 12 miles) so cannot be connected or the line is so slow that it is impossible to open the most basic webpage. One respondent wrote that fibre optic is buried in front of their house but as they are so far from the exchange they cannot access the internet at all.

3.2.2 Speeds by area

The following chart has been arranged to shows speeds by exchange (see Figure 1 for postcode groupings). All responses have been averaged (sum of speeds divided by number of respondents).

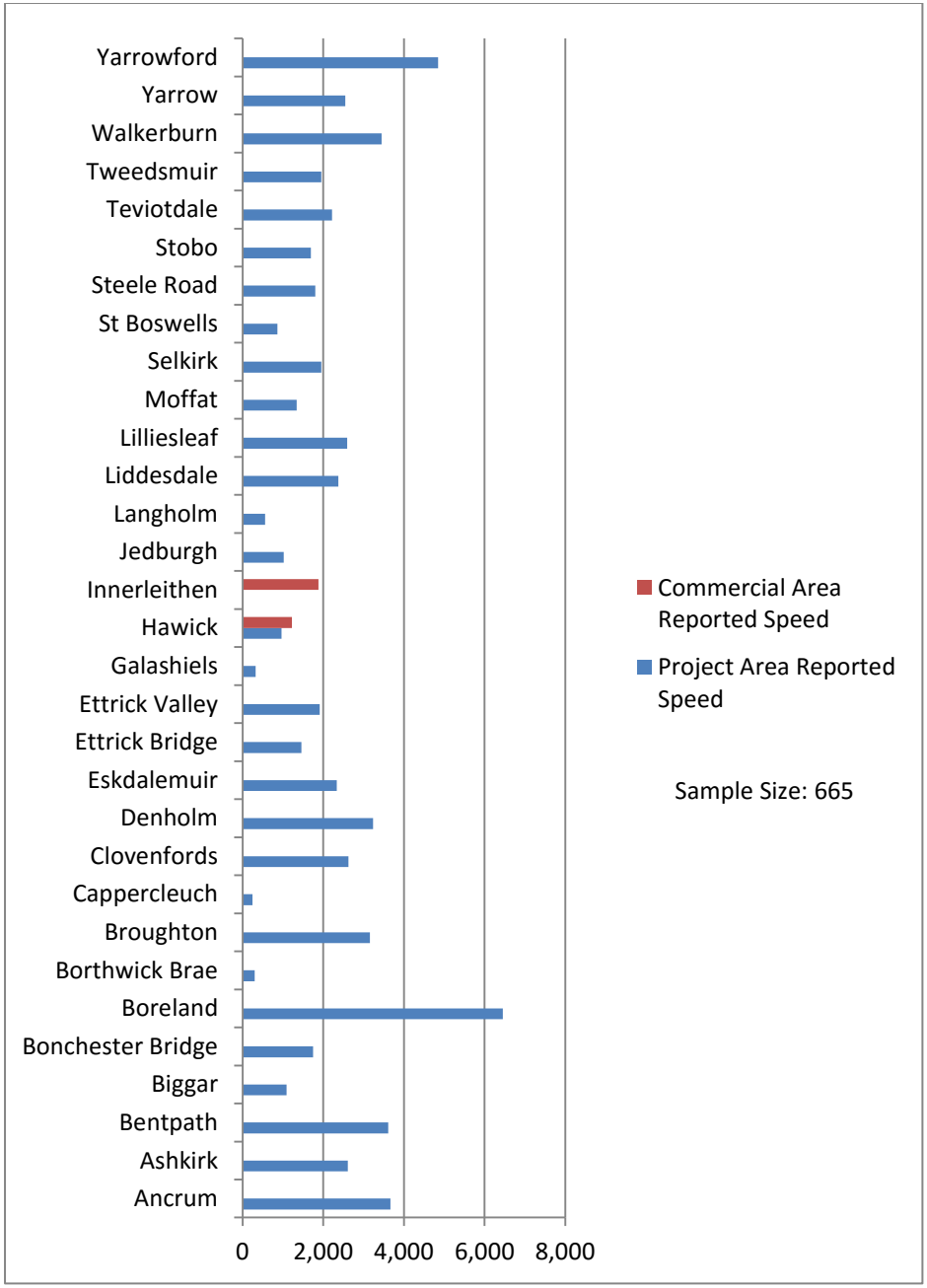


Figure 25 – Chart: Reported Speeds by Exchange in target and commercial postcodes

3.2.3 Current supplier

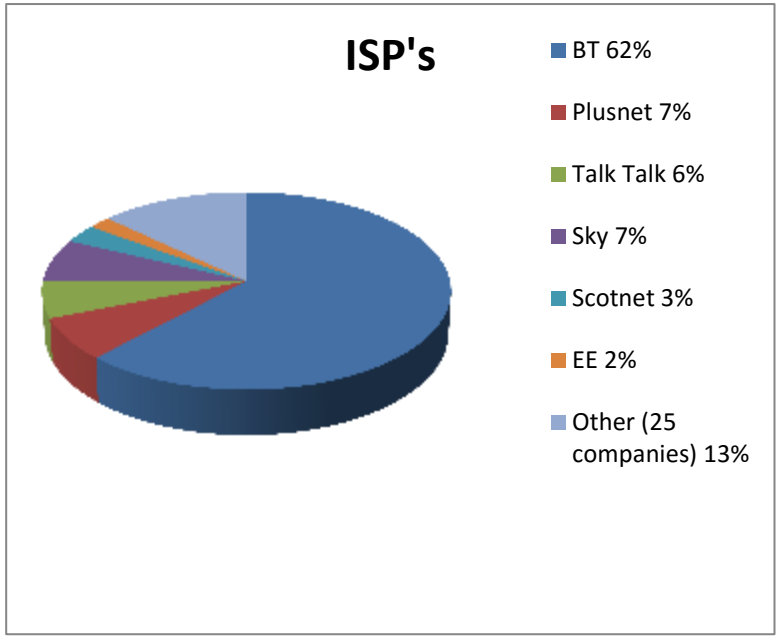


Figure 26 - Chart: Internet Service Providers. Sample Size: 760

3.2.4 Connection method

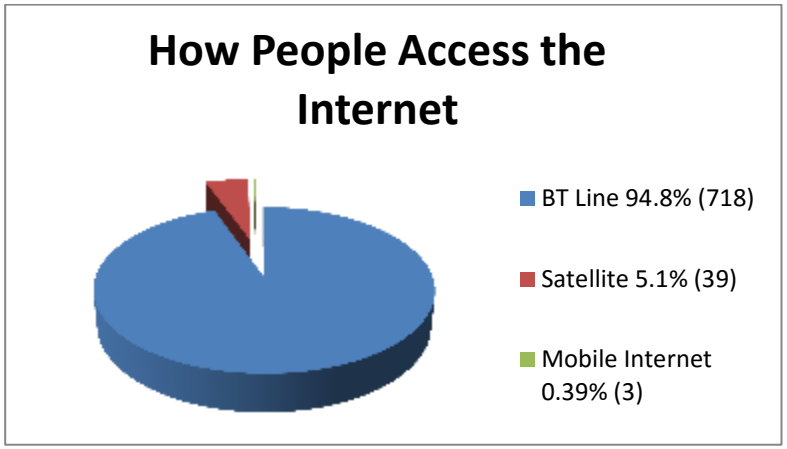
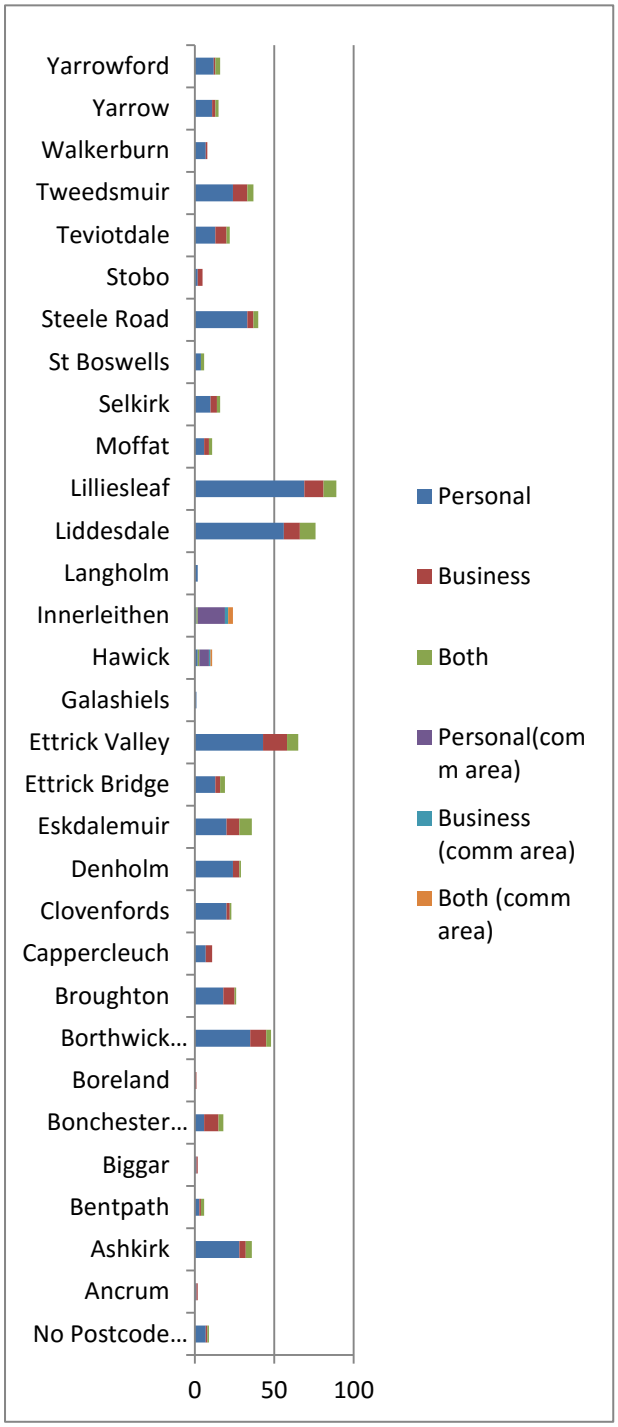


Figure 27 - Chart: How users access the internet. Sample Size: 760



3.3 Main uses and demand

3.3.1 Main uses of internet

Figure 28 - Chart: Current Main Uses of Internet by exchange/satellite/mobile. Sample Size: 784 (625 project area, 41 commercial, 93 in target postcode groups, 25 out with area/no postcode)

Chart can be found in Appendix 12 at a larger scale.

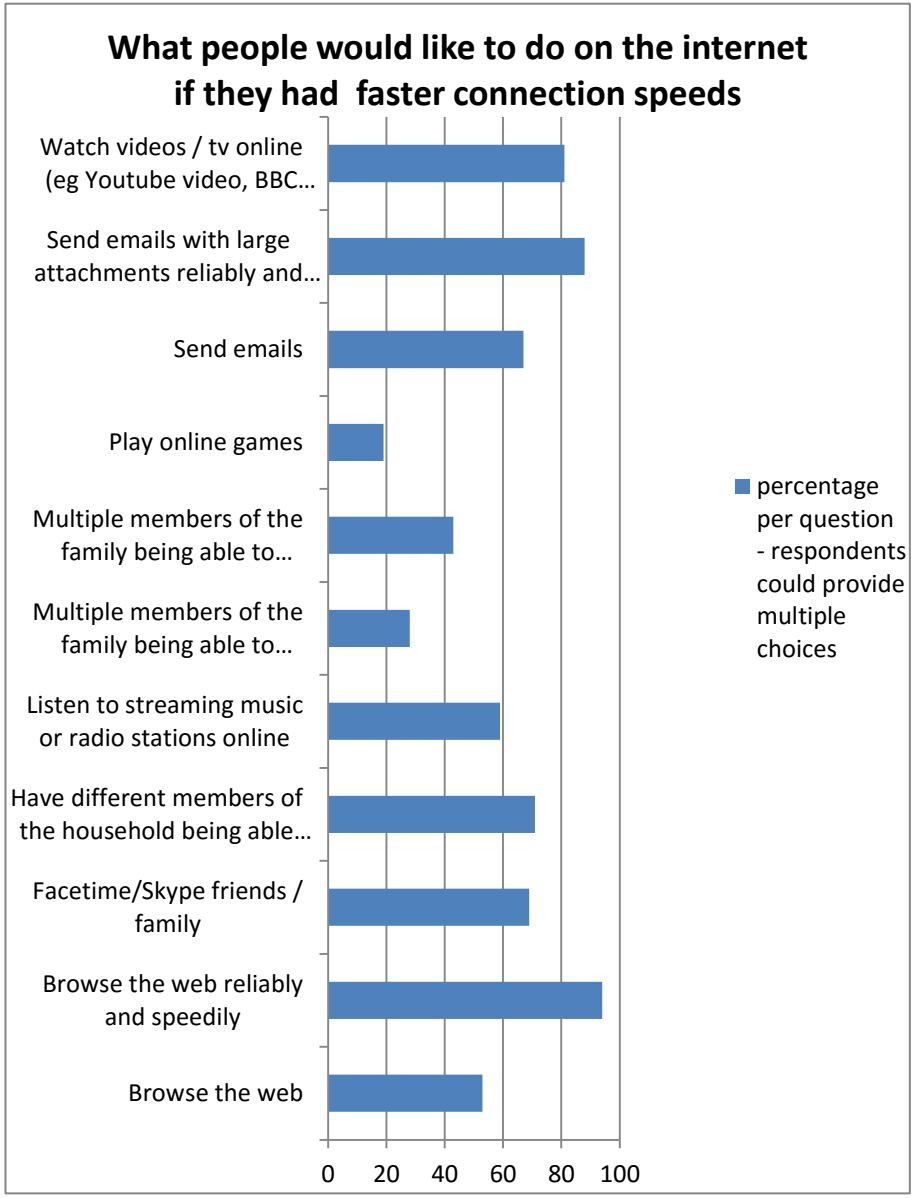


Figure 29– Chart: Responses to the question "What would you like to be able to do on the internet?" Multiple answers allowed. Sample Size: 784. A larger scale chart can be found in appendix 13

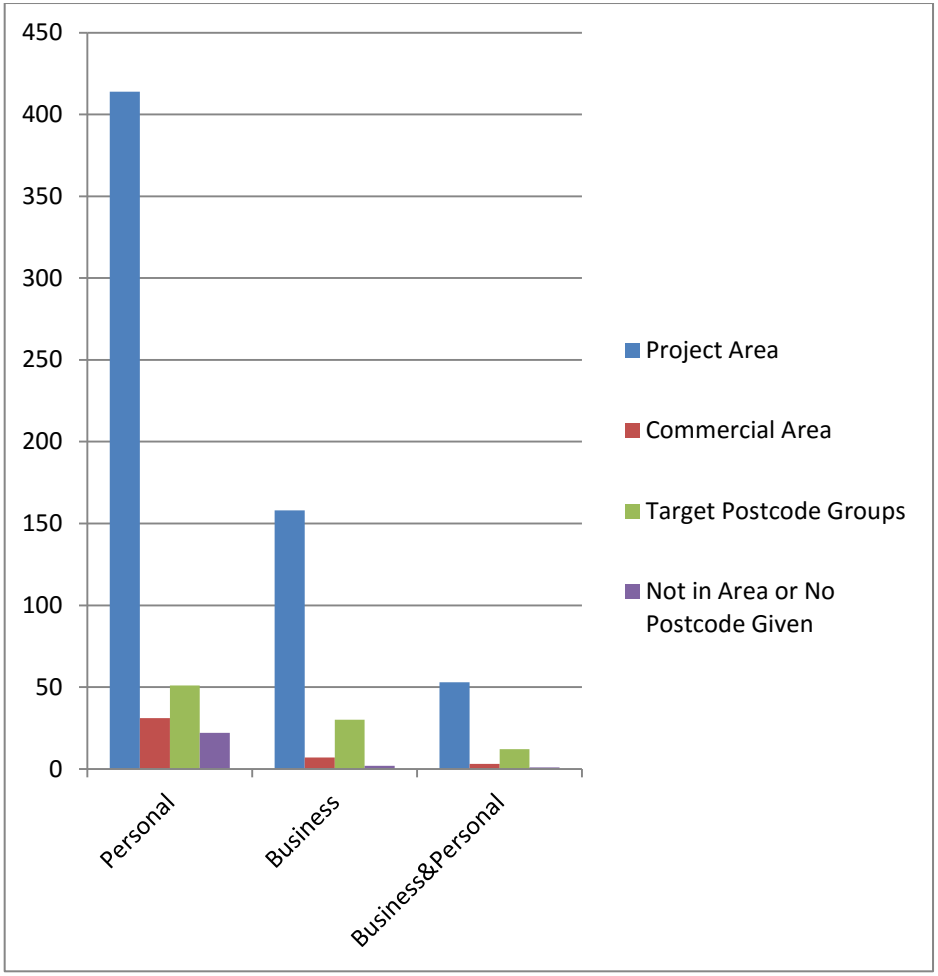


Figure 30 – Chart: Summary of current internet use. Sample Size: 784

Project area: 414 personal use, 158 business use, 53 personal and business. Commercial area: 31 personal use, 7 business use, 3 personal and business. Target postcode groups not in project area: 51 personal, 30 business, 12 personal and business. Not in area or no postcode given: 22 personal, 2 business, 1 personal and business

3.3.2 Speeds desired

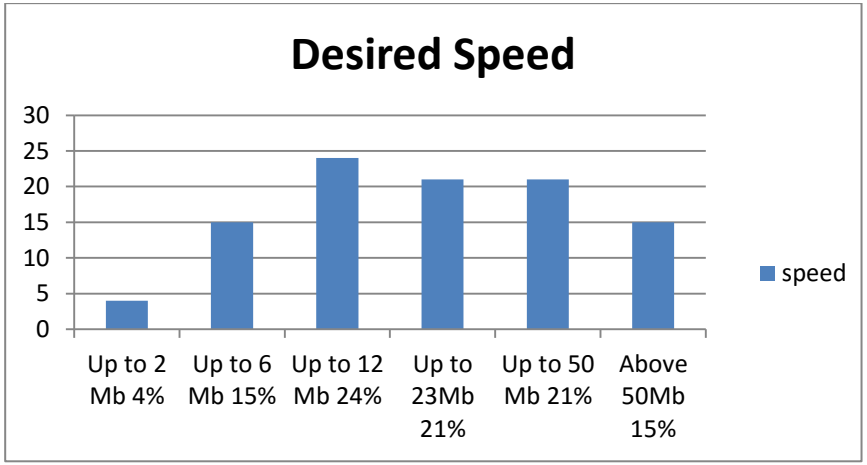


Figure 31 - Chart: Percentage of responses by desired speed. Sample Size: 784

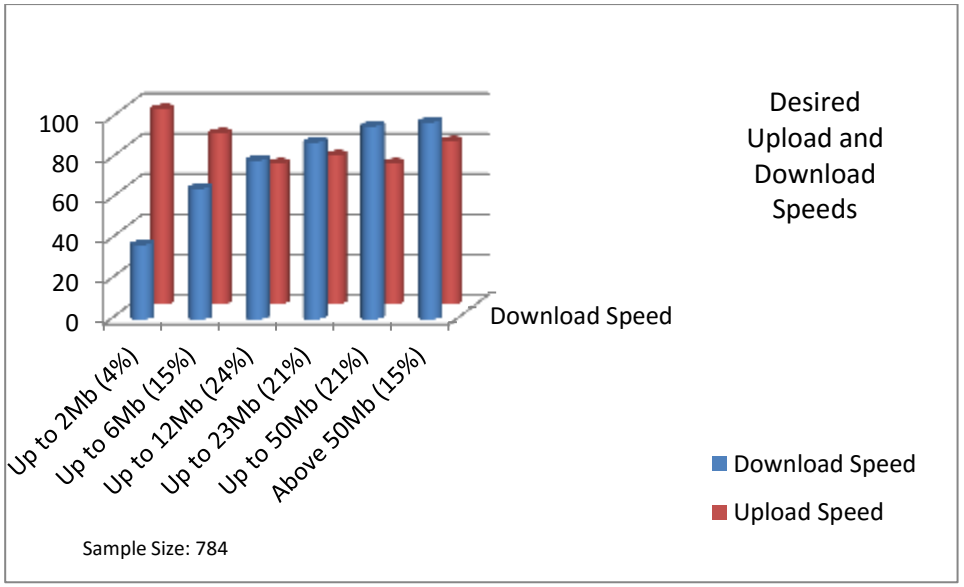


Figure 32 – Chart: Desired Upload and Download Speed – percentage of responses

In the 2-6Mb categories, the vast majority of respondents require faster upload speed. At 12Mb upload and download speeds are almost equal. As we go above 12Mb upload speed becomes less of an issue to respondents

3.3.3 Current rates/ willing to pay

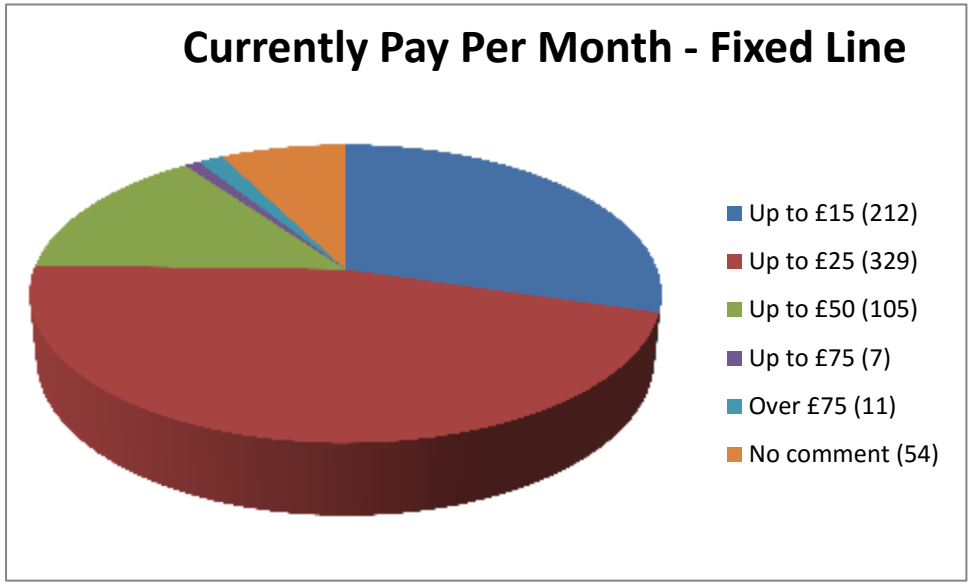


Figure 33 – Chart: Fixed Line Internet Charges. Sample Size: 718

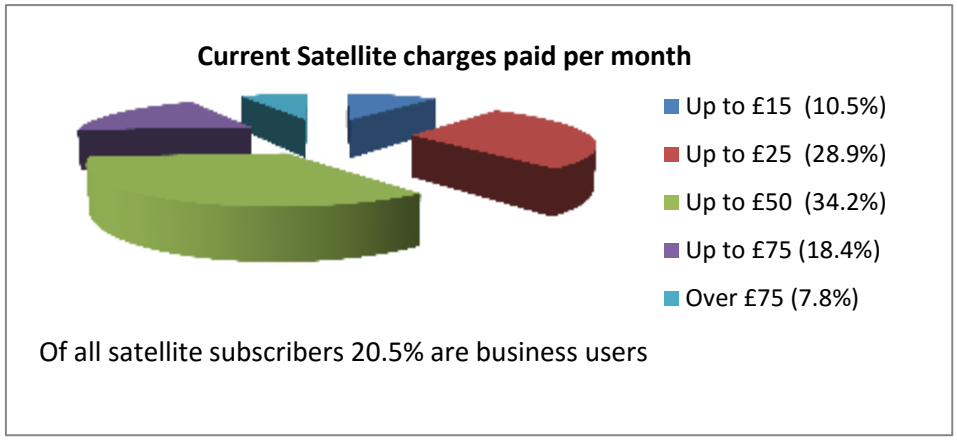


Figure 34 – Satellite Charges per Month. Sample Size 39

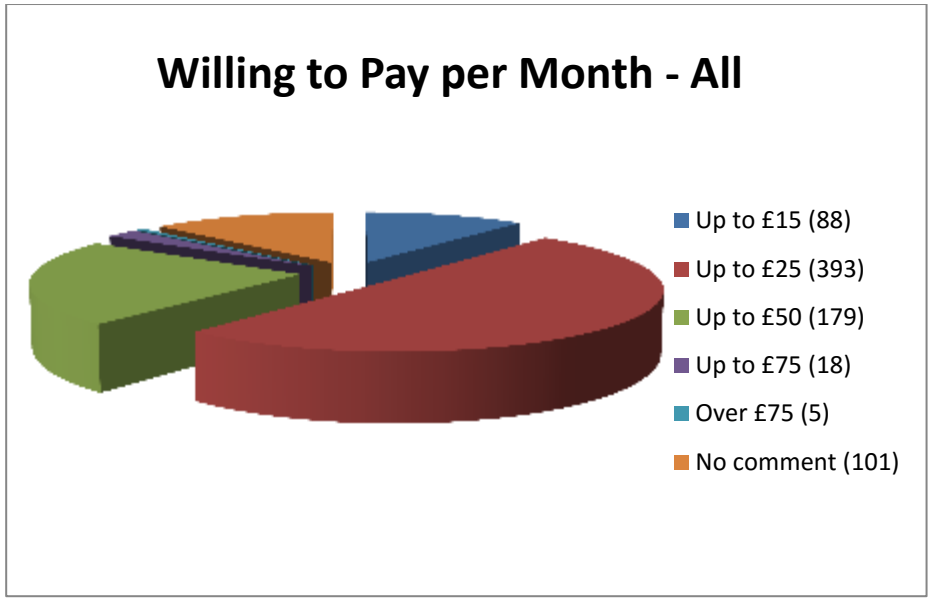


Figure 35 – Chart: Prices people are willing to pay per month for superfast (above 24Mb) broadband. Sample Size: 784

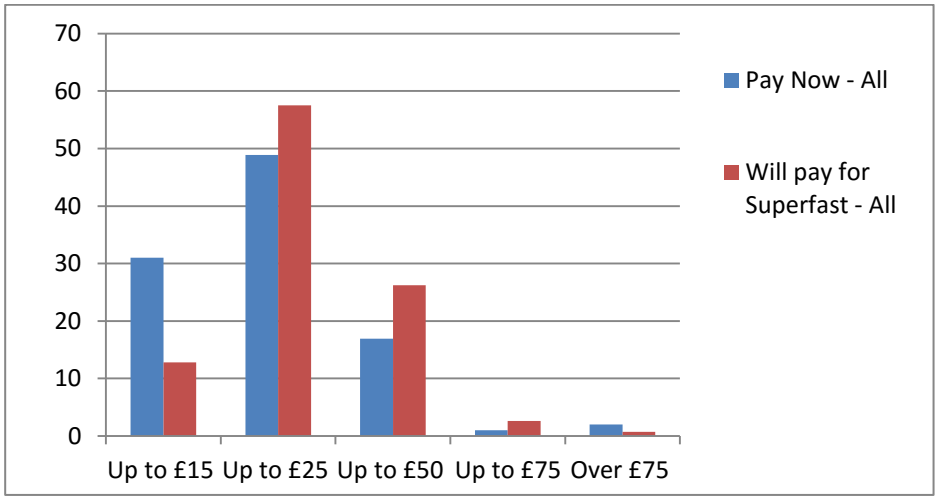


Figure 36– Chart: Cost Comparison – answers converted to percentage. Sample Size: Pay Now 695, Will Pay 683.

3.4 Business users

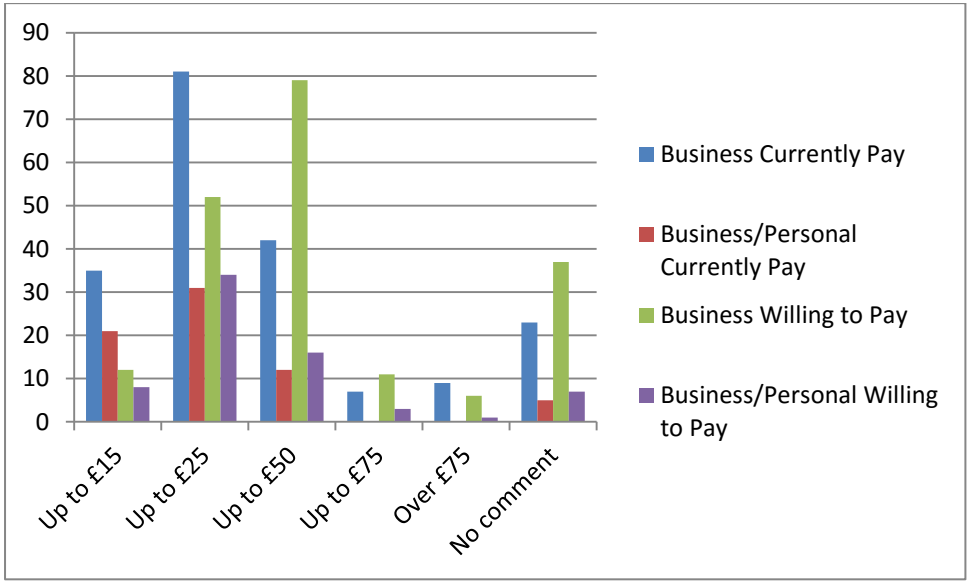


Figure 37– Chart: Business Users and Business/Personal Users Pay Now and Willing to Pay. Sample Size: Business Users 197, Business/Personal 69

3.4 Community Network

3.4.1 Desire for community network

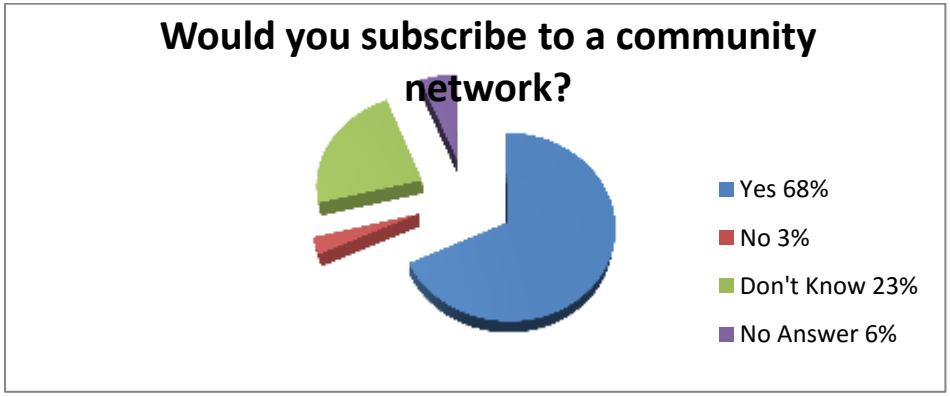


Figure 38 – Chart: Community Network. Sample Size 784

3.4.2 Volunteers for community network

Figure 39 –Chart: Willing to Volunteer. Sample Size: 578

We asked people if they would be willing to volunteer their time and expertise to help with the development of a community scheme. If 'yes' we asked them to choose from the following fields: Finance, Business Administration, Community Consultation, Network Design Fieldwork and IT.

Of those who responded the skill sets have been broken down as follows:

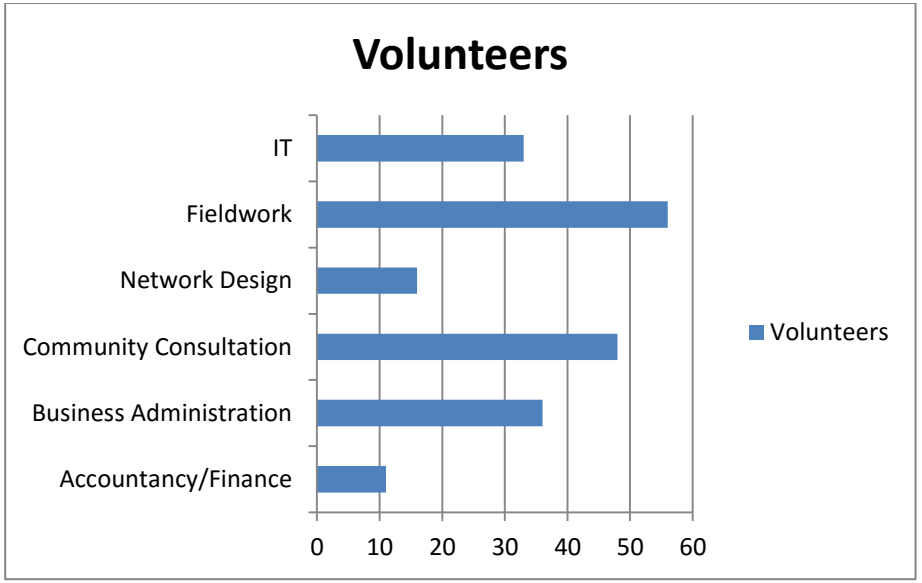


Figure 40– Chart: Number of people willing to volunteer their time and expertise. Response total 203. People who filled in this field came from 'yes' and 'maybe' replies.

3.5 Customer satisfaction/comments

3.5.1 How do you rate your internet service?

Of those who replied 'excellent': reported speeds ranged from 120 to 6,760 (landlines) and 12,000 via satellite. Of those who replied 'satisfactory'; reported speeds ranged from 160 to 6, 780 (landlines) and up to 8,000 via satellite.
Of those who replied 'poor': reported speeds ranged from 120 to 6,860 (landlines) and up to 18,000 via satellite.

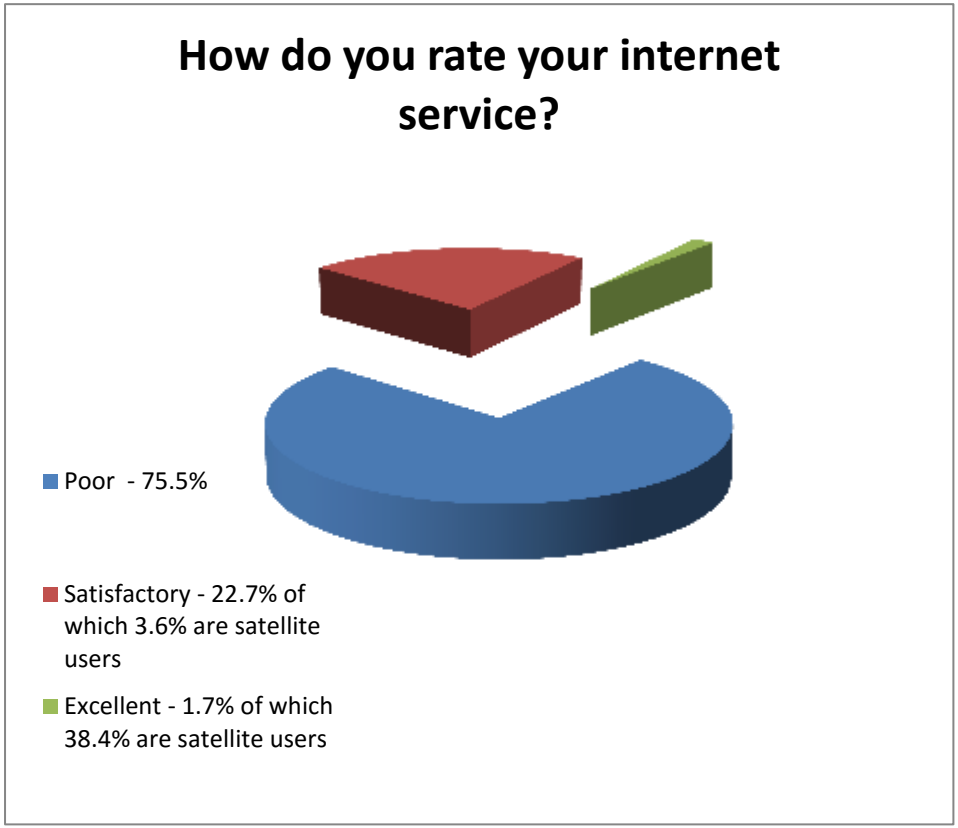


Figure 41 – Chart: Service rating. Sample Size: 731

Comments:

"Most of my shopping is done on line because we live in such a remote rural area. Often the broadband service is so slow that I cannot complete purchases. It can take up to 3 days to download programs using catch-up TV and accessing YouTube is often impossible".

"I've started an online business which involves data-hungry image and video uploads. I also run a holiday let, meaning that there can be multiple users at this address. I have to go into town to complete my work as my broadband is so slow".

"I am a photographer and need to upload large image files to servers; it takes up to three days to complete a job".

"I would use my connection mostly for business if I could get a better service. At the moment it's restricted to emails"

"Our business is at a disadvantage whilst trying to operate in a rural environment and support the local economy"

"I am profoundly deaf and rely on internet to communicate with people"

"I have given up on home broadband for business use and depend on having a studio in town – so I have to pay for two internet provisions".

"I study (Glasgow University) as some lectures are screened live; in addition, many scholarly articles are accessed through the internet. Course work is also expected to be submitted online. Poor internet provision is really hampering my studies"

"We run an accommodation business with up to 20 guests staying at any one time. Guest expectations are now for not just email and occasional browsing but also streaming VOD. Given 4 accommodation units and each is streaming a video signal, we would require a minimum bandwidth of 30 Mb guaranteed"

"Due to faulty lines our signal constantly drops to zero and we have to reset the system regularly"

Section 4

4. Community Scoping Maps

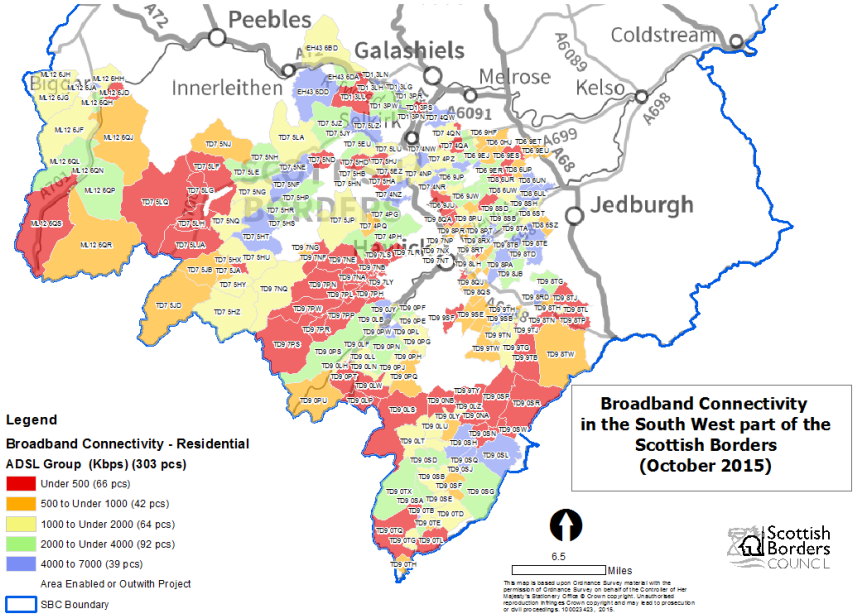


Figure 42 – Map: Speeds by Postcode Area, Scottish Borders. A full scale map can be found in appendix 5. Map Courtesy of SBC

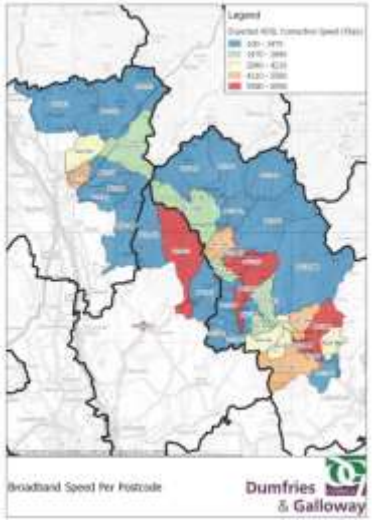


Figure 43 – Map: Speeds by postcode area Dumfries and Galloway. A full scale map can be found in appendix 2. Map courtesy of D&G C

Section 5

5. Potential funding sources and outcomes

Capital Funding

If a project to provide a community solution comes to fruition, the total project cost will be fully scoped and market tested through the OJEU (Official Journal of the European Union) procurement process. CBS have estimated the total project costs to be up to £1.2 m (£1,000/premise). CBS support will be a maximum of £1.068m with the community contributing the balance of £0.132m (11%). The community contribution is expected to come from a mix of installation fees for subscribers (fees to be determined) and private sector investment.

It is proposed that the project, if approved, would be funded from the £9m SG SRDP Rural Development: Broadband programme. This programme is funded by the SG and EU with no capital infrastructure resource requirement from HIE/CBS. With support from the SG, the HIE Legal and Regional Development (European) teams, HIE/CBS has concluded in principle a Service Level Agreement for the delivery of the SRDP.

It is anticipated all funding will be released during the 2016/17 and 2017/18 financial years.

While CBS funding support is primarily targeted at assisting the core capital infrastructure costs associated with designing and building a community broadband network funding is also available to support project scoping and planning stages.

CBS provided grant funding to SUP to undertake community engagement and scoping for the Ettrick and Beyond Project which hoped to aggregate a number of communities in Rural Scottish Borders and Dumfries and Galloway.

Discussions are on-going with a view to establishing the requirements required for State aid public consultations, OJEU procurement and business planning to progress this project through to formal application stage, which includes identifying a suitable community legal entity to take the project forward.

CBS is able to offer technical support assistance towards pre-develop costs associated with undertaking technical assessment, business planning and establishment of a suitable legal entity. In additional CBS has engaged a specialist supply partner (Atkins/Farrpoint)

to provide community organisations with independent technical and procurement support.

Development Funding

The issue with the Ettrick and Beyond project is obtaining funding to engage a project development officer to co-ordinate and manage the project as funding for such a post is currently not possible through CBS

The participating communities and lead community body will need to secure funds for the development of this project and CBS, SUP, SBC, D&G and are working to identify potential funding sources.

The following has been initially identified as potential sources of development funding:

LEADER

https://www.ruralnetwork.scot/funding/leader

LOTTERY

https://www.biglotteryfund.org.uk/Scotland

DUMFRIES & GALLOWAY AREA COMMITTEE GRANTS

http://www.dumgal.gov.uk/index.aspx?articleid=1555

WINDFARM including

Annandale & Nithsdale Community Benefit Company (ANCBC)

https://www.foundationscotland.org.uk/programmes/ancbc/

Glenkerie

https://www.foundationscotland.org.uk/programmes/infinis-glenkerie/

Langhoperig
http://sse.com/beingresponsible/responsiblecommunitymember/localcommunityfunds/langhoperig/

Clyde Borders

http://sse.com/beingresponsible/responsiblecommunitymember/localcommunityfunds/clydeborders/

Clyde, Dumfries and Galloway

http://sse.com/beingresponsible/responsiblecommunitymember/localcommunityfunds/clydedumfriesandgalloway/

SSE Sustainable Development Fund –
http://sse.com/beingresponsible/responsiblecommunitymember/sustainablefund/

Section 6

6. Conclusions

The results from the community surveys show an overwhelming demand for superfast broadband.

There is an indication that much of the project area may not benefit from the current DSSB project.

The communities cannot rely on mobile infrastructure (just 3 people reported using mobile to connect from both surveys) to obtain connectivity. Significantly improving the mobile network would alleviate many of the issues around connectivity, health and safety, etc.,

Satellite installation is viewed by many within the survey responses as a short term solution which has proved costly and in some cases, unreliable for the individual.

The survey results and data gathered from other sources within this document support the case for further consideration of an aggregated project for the Ettrick and surrounding areas. See Appendix 14 for aggregation process.

To progress this, a number of areas require to be investigated as detailed below:

Next Steps

- Obtain agreement on scoping document
- Obtain agreement from all the participating communities to take aggregated project forward
- Appoint/create a suitable organisation to develop next stage of project and beyond
- Create a steering group from representative bodies from all communities to reflect the project area
- Secure Development Funding – contribution from community groups in applying/securing grant funding?
- Agreement for Public/State Aid consultation process

Section 7. Acknowledgements

A number of organisations, agencies, businesses and individuals have assisted with the project and I would like to thank the following for all their help.

Bob Murison, Clare Hay, David Pollard, Ogilvie Jackson, Dr Heidi Goodship, Erin Murray, Amanda Burgauer, Jaqueline Sinton, Paul Greaves, Amanda Gaze, Catherine Maxwell Stuart, Sarah Mc Donald, Alison Barker, Sylvia Moffat, Richard Thorne, Bill Staempfli, Jeremy Snodgrass, Chris Trotman, Barbara Elborn, Laura Paterson, Nick Jennings, Eva Milroy, Gavin Keith, James Pocock, Barry Young, Scott Wilson, Barbara Elborn, Bryan McGrath, Iain Laidlaw, Stephen Dixon.

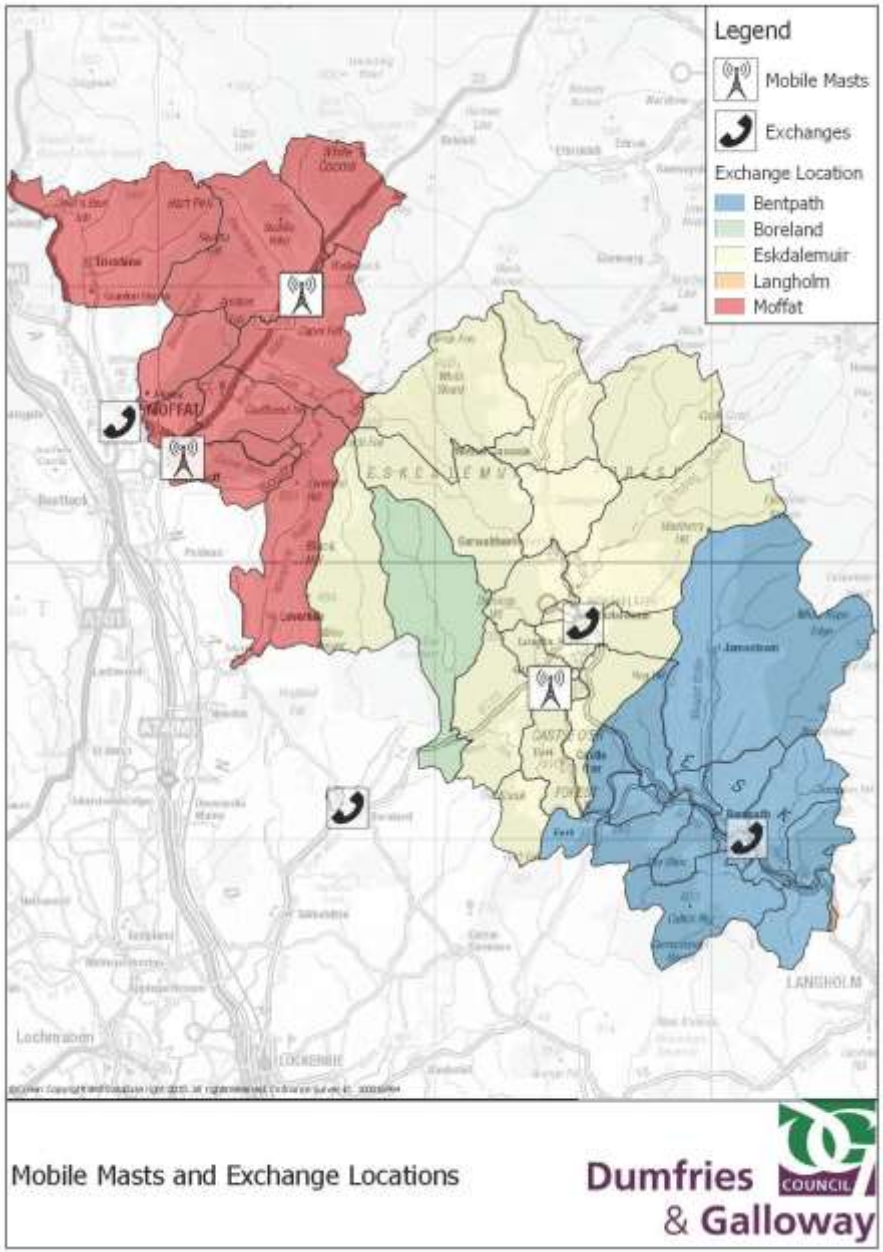
Dumfries and Galloway Council, Scottish Borders Council, Forestry Commission Scotland, Gigaplus Argyll, The Bridge, The Hub Eskdalemuir, Community Broadband Scotland, Samye Ling Monastery, Moffat Online, Clovenfords.Net, Tweeddale Press Group, BBC Radio Scotland, Clyde and Forth Press Ltd., Buccleuch Group, CKD Galbraith, Glen Estate, Third Sector Dumfries and Galloway, Traquair House, Crichton Institute, National Farmers Union, Agriculture, Food and Rural Communities Directorate, Business Gateway.

Many community volunteers helped by knocking on their neighbours doors, posting news to social media pages and forwarding an email link to people in their area. Without all their hard work I'm sure we would have received far fewer responses and I would like to take this opportunity to thank them all for their time and efforts.

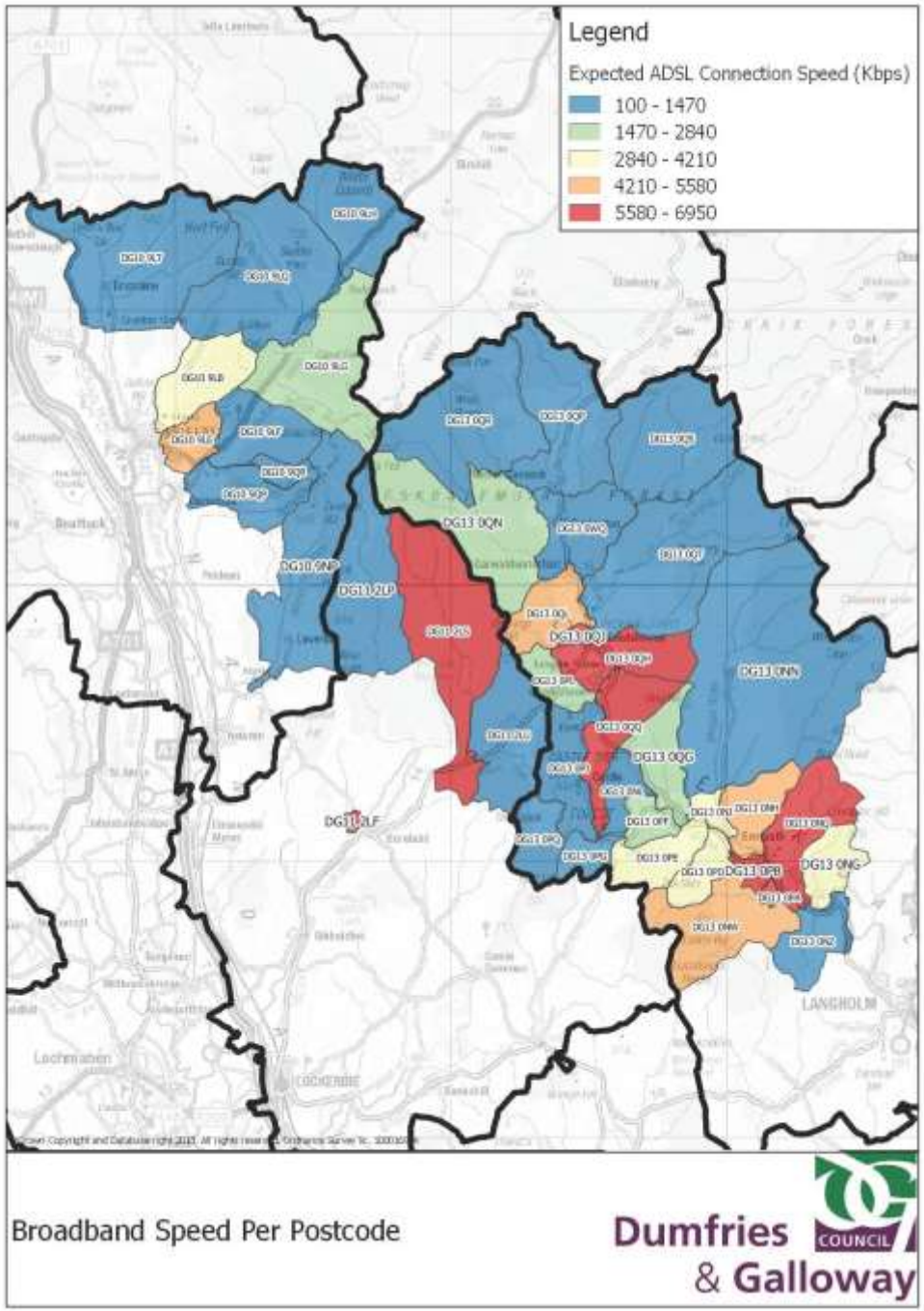
Section 8

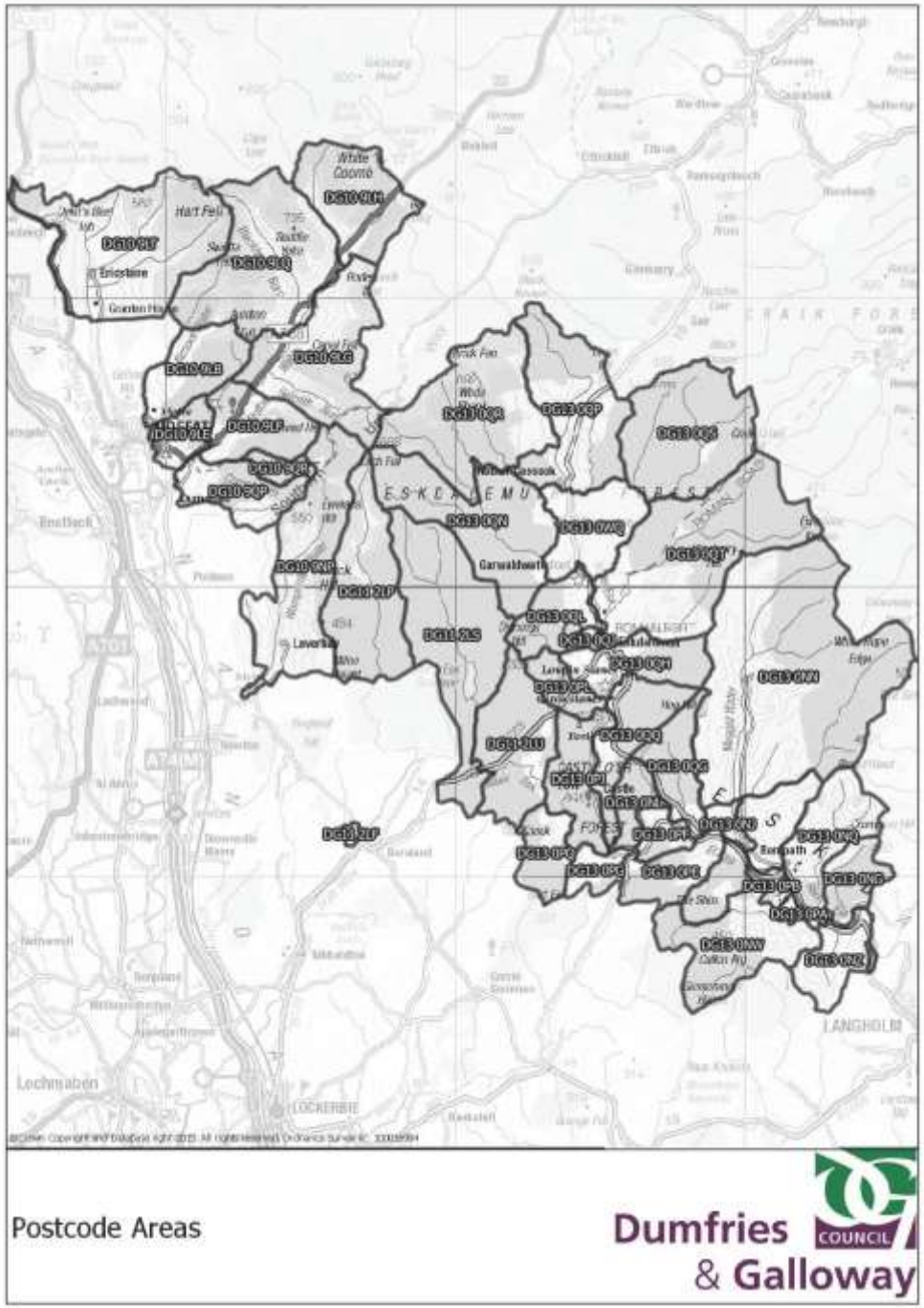
8. Appendices

Appendix 1: Mobile Mast Sites and Exchanges in D&G Project Area. Courtesy of Dumfries and Galloway Council

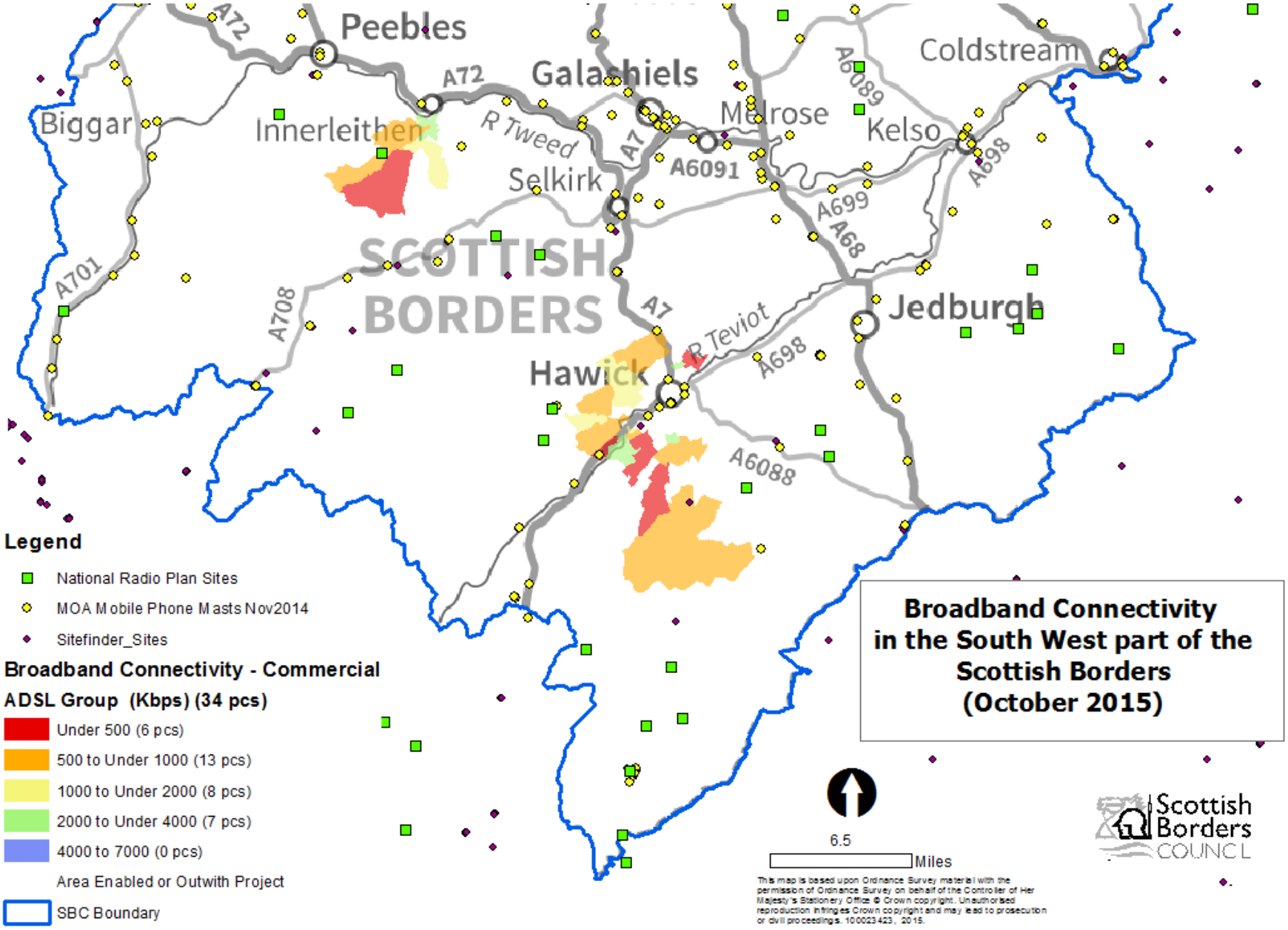


Appendix 2 and 3: Speeds by Postcode and Postcode Areas D&G. Courtesy of D&G Council

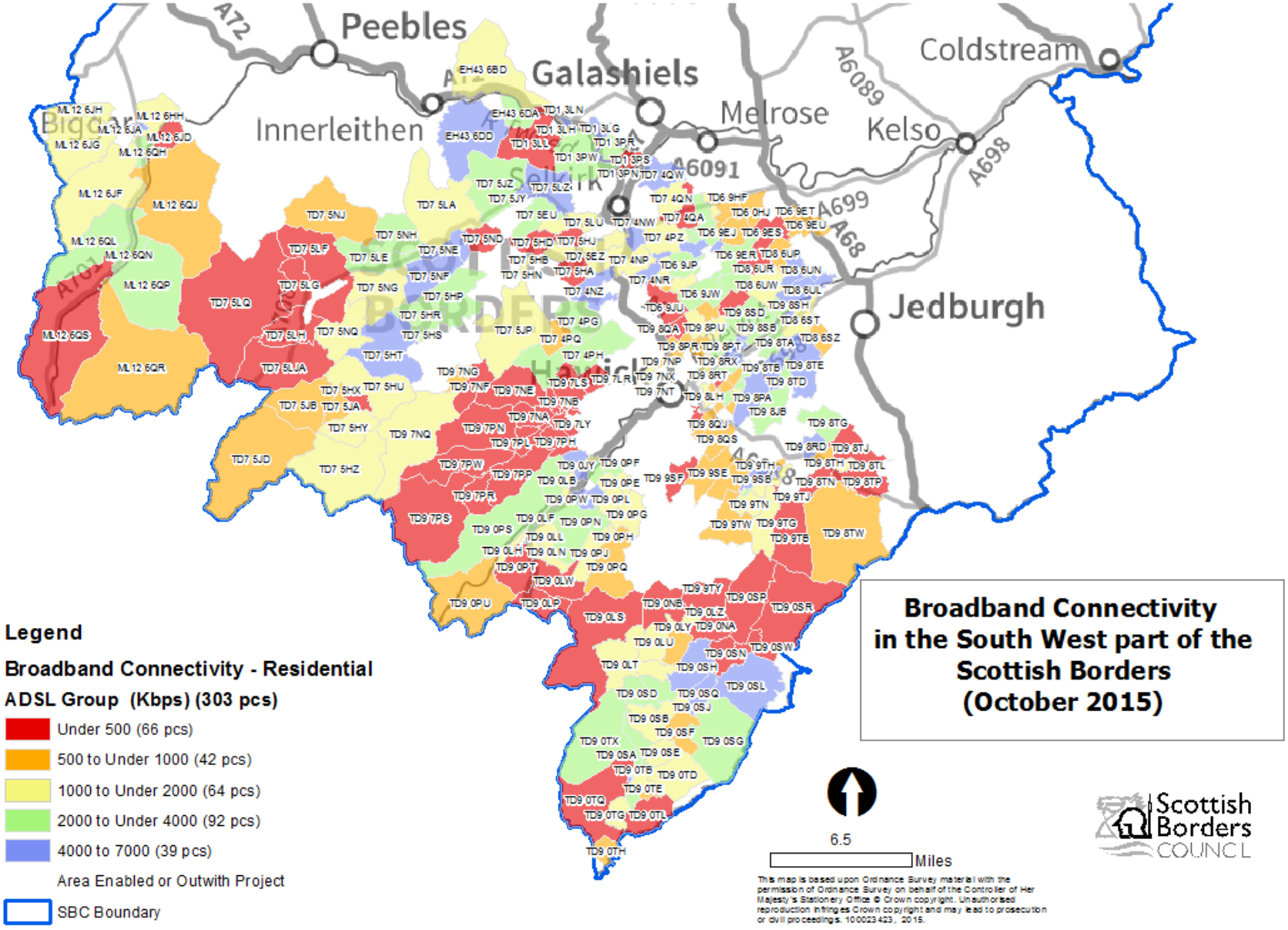




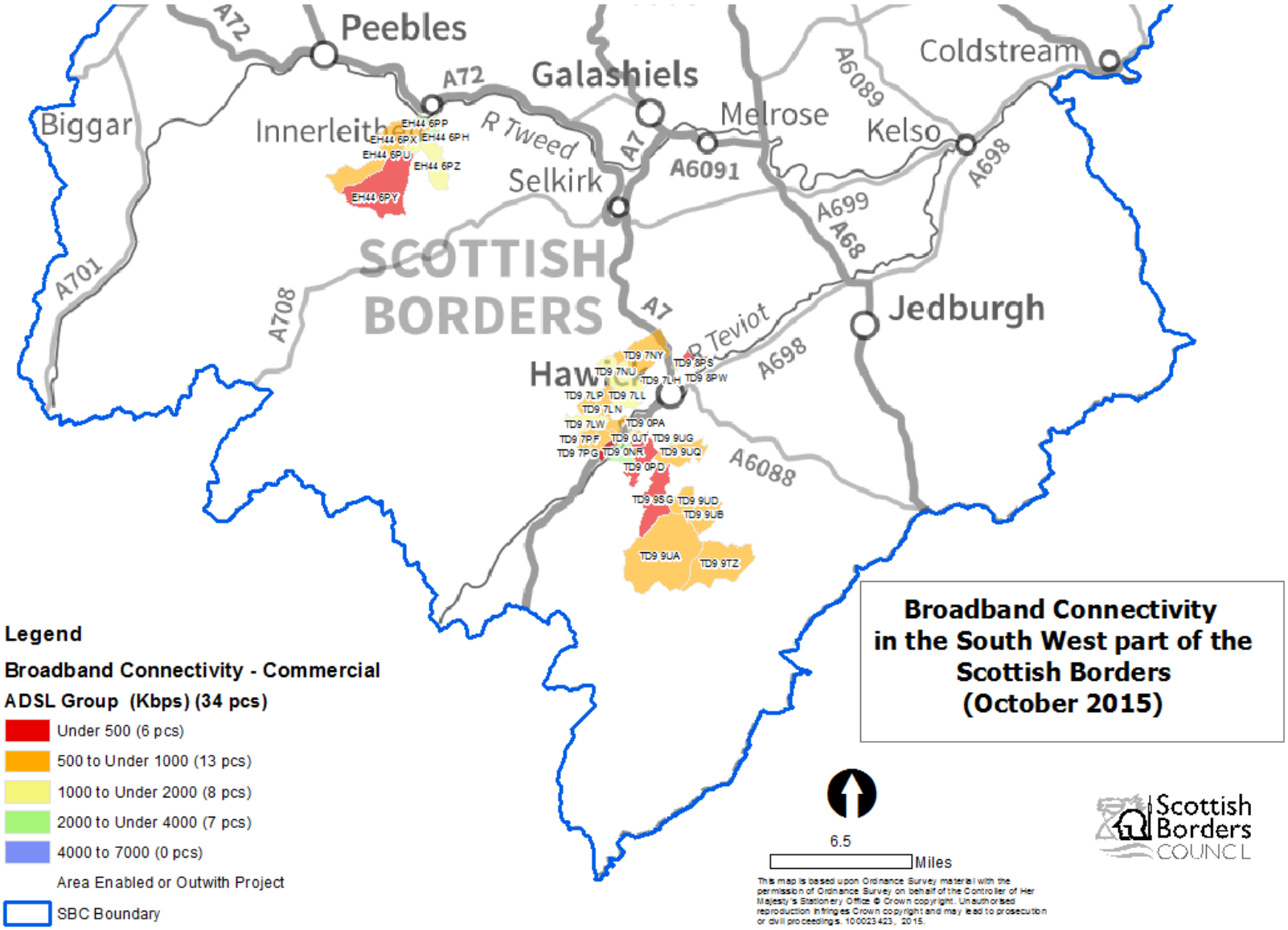
Appendix 4: BT commercial Area Connectivity and Mobile Mast Sites. Map courtesy of SBC



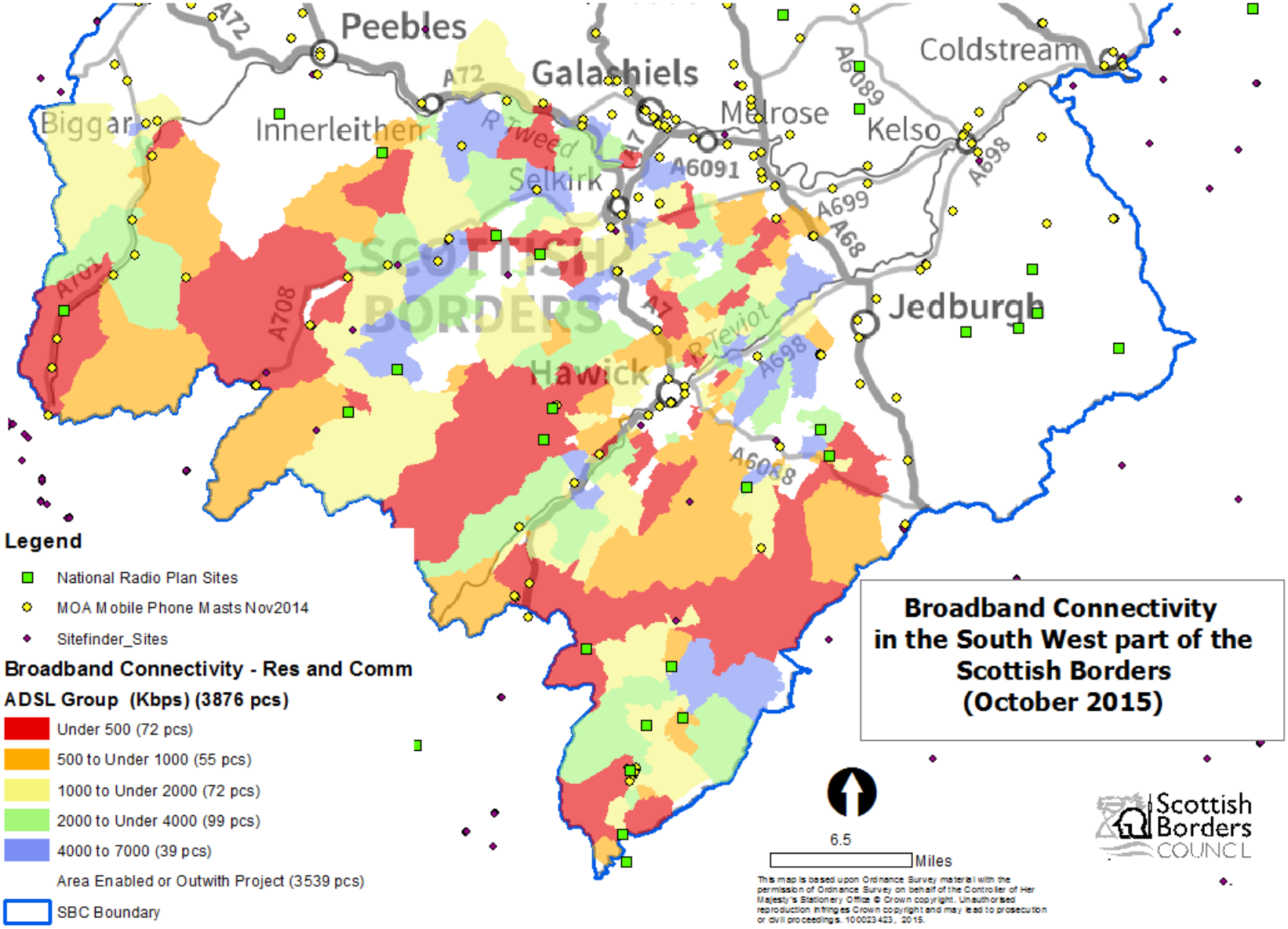
Appendix 5: Project Postcodes. Map courtesy of SBC



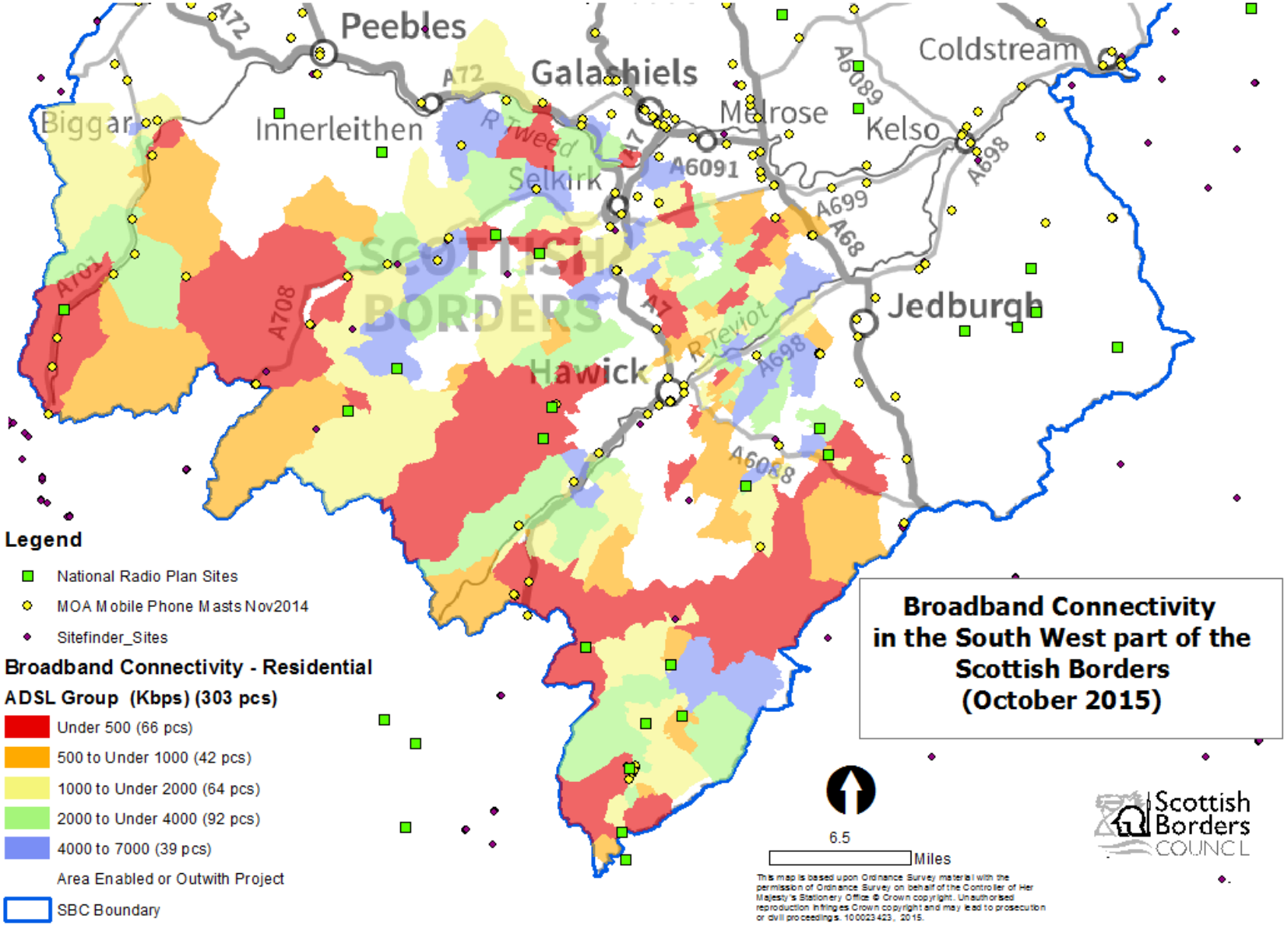
Appendix 6: BT Commercial Area postcodes. Map courtesy of SBC



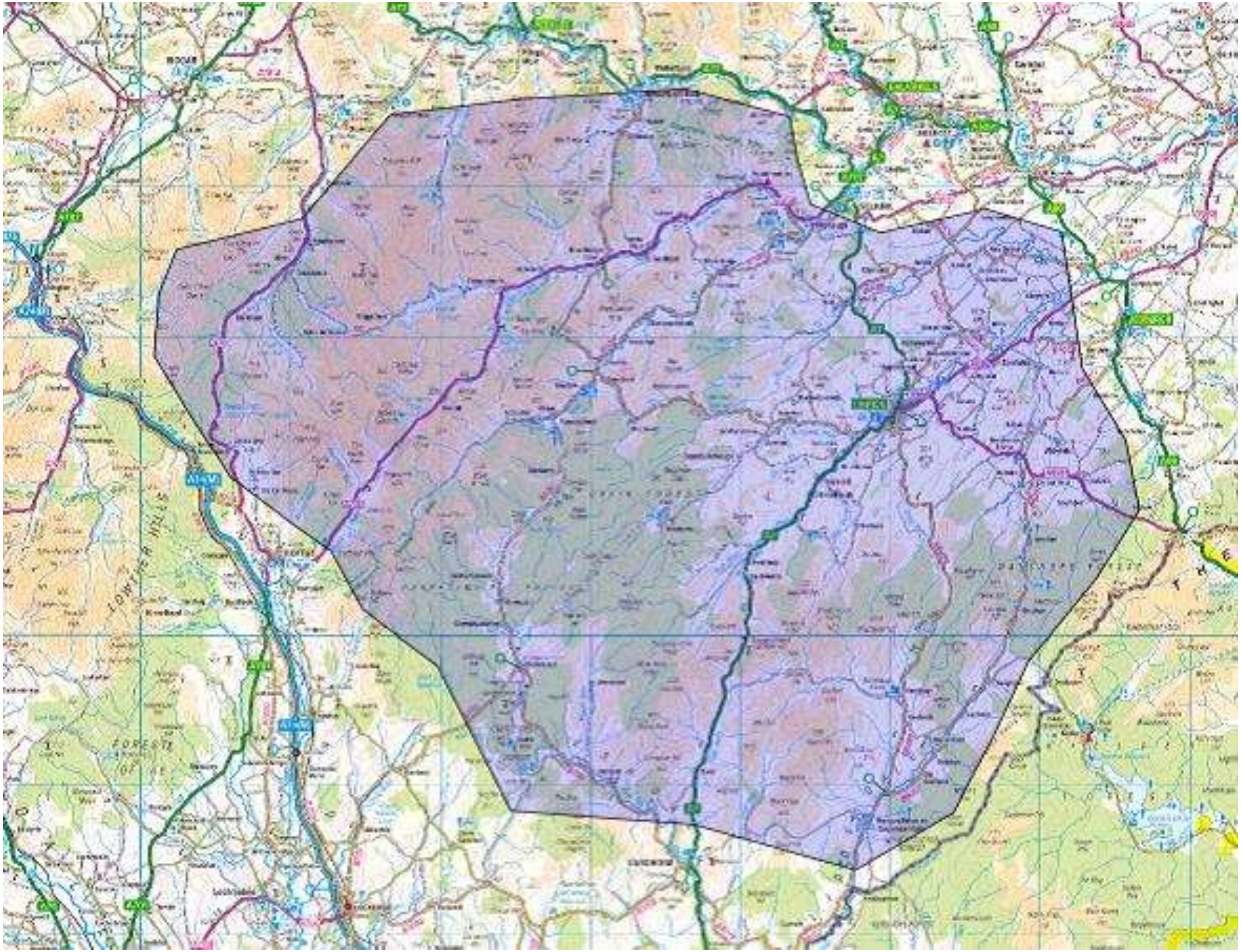
Appendix 7: Connectivity Project and Commercial Areas. Map courtesy of SBC



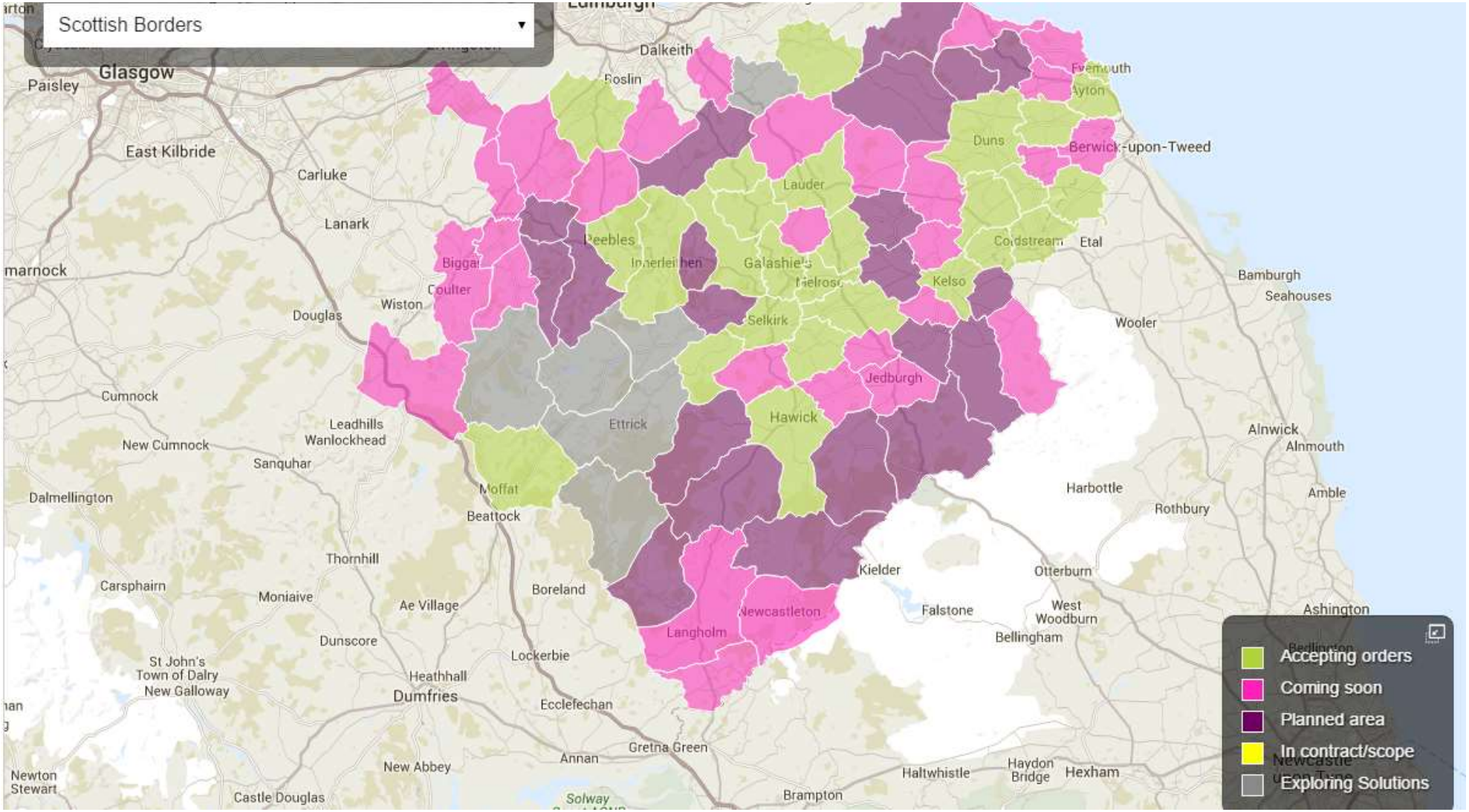
Appendix 8: Broadband Connectivity, Project Area. Map courtesy of SBC



Appendix 9: Project and Commercial Area Map. Courtesy of Forestry Commission Scotland



Appendix 10: Current Digital Scotland rollout map. Source: http://www.digitalscotland.org/whereandwhen



Appendix 11: Community Survey Questions

CBS Survey – Ettrick and Beyond

Ettrick, Yarrow, Upper Teviotdale, Borthwick Water, Bedrule, Minto, Hassendean, Tweedsmuir, Broughton, Moffat Water, Lilliesleaf, Ashkirk, Midlem, Eskdalemuir, Yair, Glen, Orchard Mains, Peel, Traquair, Newcastleton.

Published deadline 2nd September 2015

We (Southern Uplands Partnership) have been commissioned by Community Broadband Scotland to undertake a survey of rural areas in the Scottish Borders and Dumfries and Galloway who may not be served by the current Digital Scotland Superfast Broadband programme being delivered through BT – additional information on this can be found at http://www.digitalscotland.org/superfast-broadband/

Our aim is to collate as much data as possible on your current service, location and desire for a better service so this can be used to explore the potential of a community lead initiative to deliver superfast broadband to rural areas. We are aware that many of you have already completed a broadband survey in your community council area and we will endeavour to include these results where possible. Please take a moment to fill out the following questionnaire and return by one of the following methods:

online via Survey Monkey by selecting "done" at the end of this questionnaire or if this has been emailed to you, return to julienock@sup.org.uk

1. Please give your name and postcode

Name

Postcode

2. Are you able to access the internet at the above address?

Yes

No

If not, please tell us why

3. Please run a speed test and insert your results below. Go to www.speedtest.net

or http://speedtest.btwholesale.com/(you will need to have a flash player installed to use this one)

Download Speed

Upload Speed

Time of day test taken

4. How do you connect to the Internet in your premises?

BT phone line

Satellite

Local community provider

Other (please specify)

5. Which internet service provider do you use?

BT

Talk Talk

Plusnet

Other (please specify)

6. How would you describe your current internet service?

Poor

Satisfactory

Excellent

Comments

7. Which best describes your main use of the internet at the above address?

Mostly personal (email, shopping, banking, contacting family members, social media, tv, etc.,)

Mostly business (remote access, conference calls, data download/upload, etc.,)

Other (please specify below)

Further details/comments

8. Please tick any of the following that you would like to be able to do over the internet.

Browse the web

Browse the web reliably and speedily

Send emails

Send emails with large attachments reliably and speedily

Facetime/Skype friends / family

Play online games

Multiple members of the family being able to concurrently play games / online

Multiple members of the family being able to separately facetime/skype friends/family at the same time.

Listen to streaming music or radio stations online

Watch videos / tv online (eg Youtube video, BBC iPlayer, Catchup TV)

Have different members of the household being able to do any or all of the above at the same time

Other (please specify)

* 9. What internet speed would you like to receive at the above address?

Download speed (to watch catch up TV, play online games, use Skype etc.,)
Upload speed (to send photo or video, transfer files, etc.,)

Up to 2MB Low quality – can take up to 3 minutes to download the average length music file

Up to 2MB Low quality – can take up to 3 minutes to download the average length music file Download speed (to watch catch up TV, play online games, use Skype etc.,)

Up to 2MB Low quality – can take up to 3 minutes to download the average length music file Upload speed (to send photo or video, transfer files, etc.,)

Up to 6MB Medium quality – can take up to 3.5 seconds to download the average length music file

Up to 6MB Medium quality – can take up to 3.5 seconds to download the average length music file Download speed (to watch catch up TV, play online games, use Skype etc.,)

Up to 6MB Medium quality – can take up to 3.5 seconds to download the average length music file Upload speed (to send photo or video, transfer files, etc.,)

Up to 12MB TV quality – music file download 1 second

Up to 12MB TV quality – music file download 1 second Download speed (to watch catch up TV, play online games, use Skype etc.,)

Up to 12MB TV quality – music file download 1 second Upload speed (to send photo or video, transfer files, etc.,)

Up to 23MB High Quality – instant music file download

Up to 23MB High Quality – instant music file download Download speed (to watch catch up TV, play online games, use Skype etc.,)

Up to 23MB High Quality – instant music file download Upload speed (to send photo or video, transfer files, etc.,)

Up to 50M Superfast – allows multiple users to stream TV, etc.,

Up to 50M Superfast – allows multiple users to stream TV, etc., Download speed (to watch catch up TV, play online games, use Skype etc.,)

Up to 50M Superfast – allows multiple users to stream TV, etc., Upload speed (to send photo or video, transfer files, etc.,)

Above 50MB Superfast – allows multiple users to stream TV, etc.,

Above 50MB Superfast – allows multiple users to stream TV, etc., Download speed (to watch catch up TV, play online games, use Skype etc.,)

Above 50MB Superfast – allows multiple users to stream TV, etc., Upload speed (to send photo or video, transfer files, etc.,)

Other (please specify)

10. How much do you pay for your current internet service per month? (please check your latest bill for internet charge)

Up to £15

Up to £25

Up to £50

Up to £75

More than £75

I am a business user (please give further details of monthly fees to your business)

11. How much would you be willing to pay per month for a *superfast broadband service? * Superfast broadband = more than 24MB

Up to £15

Up to £25

Up to £50

Up to £75

More than £75

I am a business user (please indicate an ideal internet speed and price you would be willing to pay for it)

12. Would you be prepared to subscribe to a faster, community owned superfast broadband network?

Yes

No

Don’t Know

Comments…

13. Do you have any comments about your current internet service that you would like to share with us?

14. Would you be willing to become a volunteer or support a local community organisation seeking to deliver a superfast broadband solution? If so, which areas of work are you interested in?

Yes – if yes please indicate type of volunteer work you may be interested in below:

No

Maybe

Accountancy/Finance

Business Administration

Community Consultation

Network Design

Fieldwork

IT

Other (please specify)

15. *Please provide your contact details so that we can keep you informed of developments. (This information will only be used in relation to the provision of broadband services in your area and will not be disclosed to third parties without your consent) *This answer is optional.

Name

Address

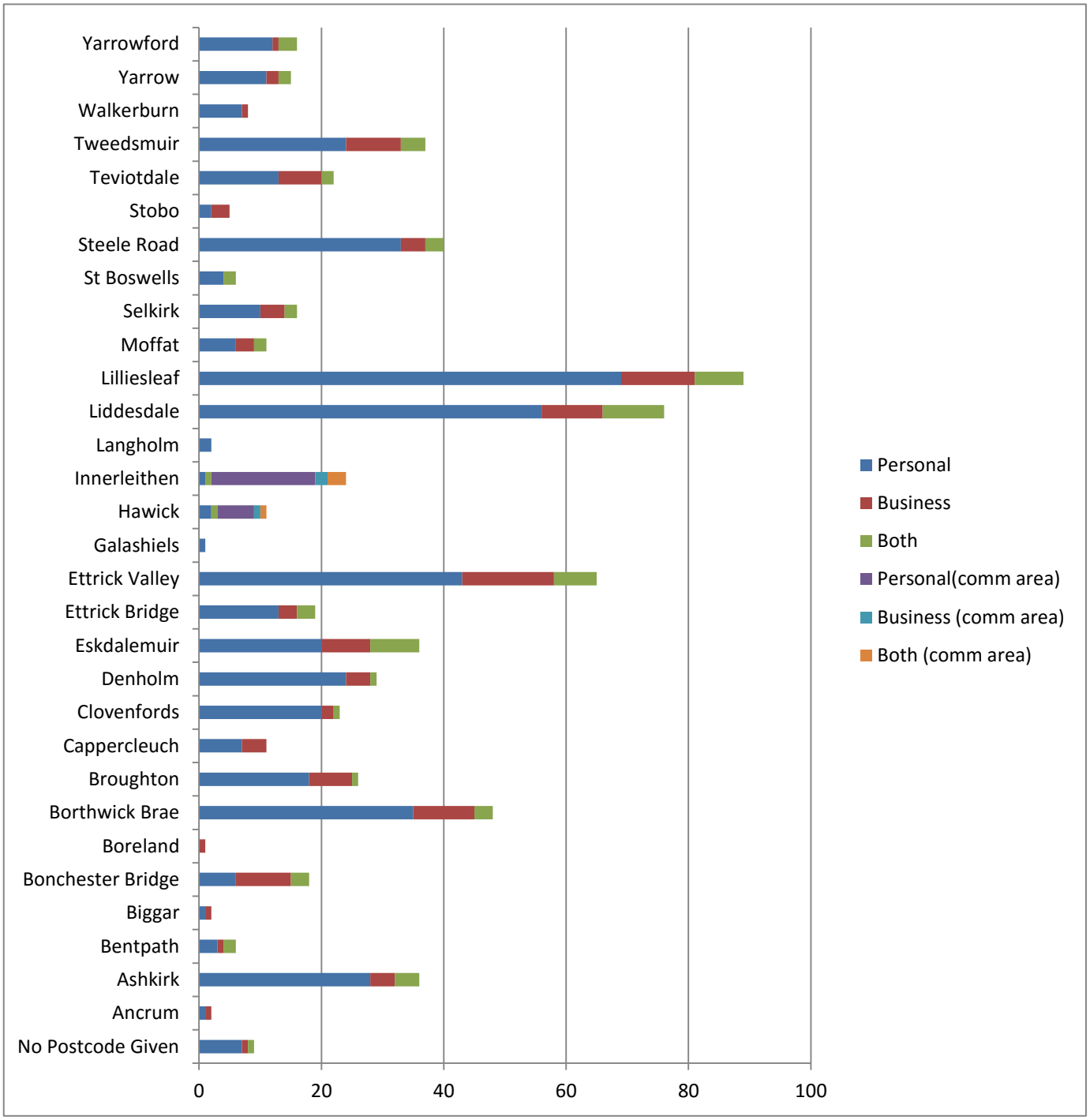
Postcode

Telephone

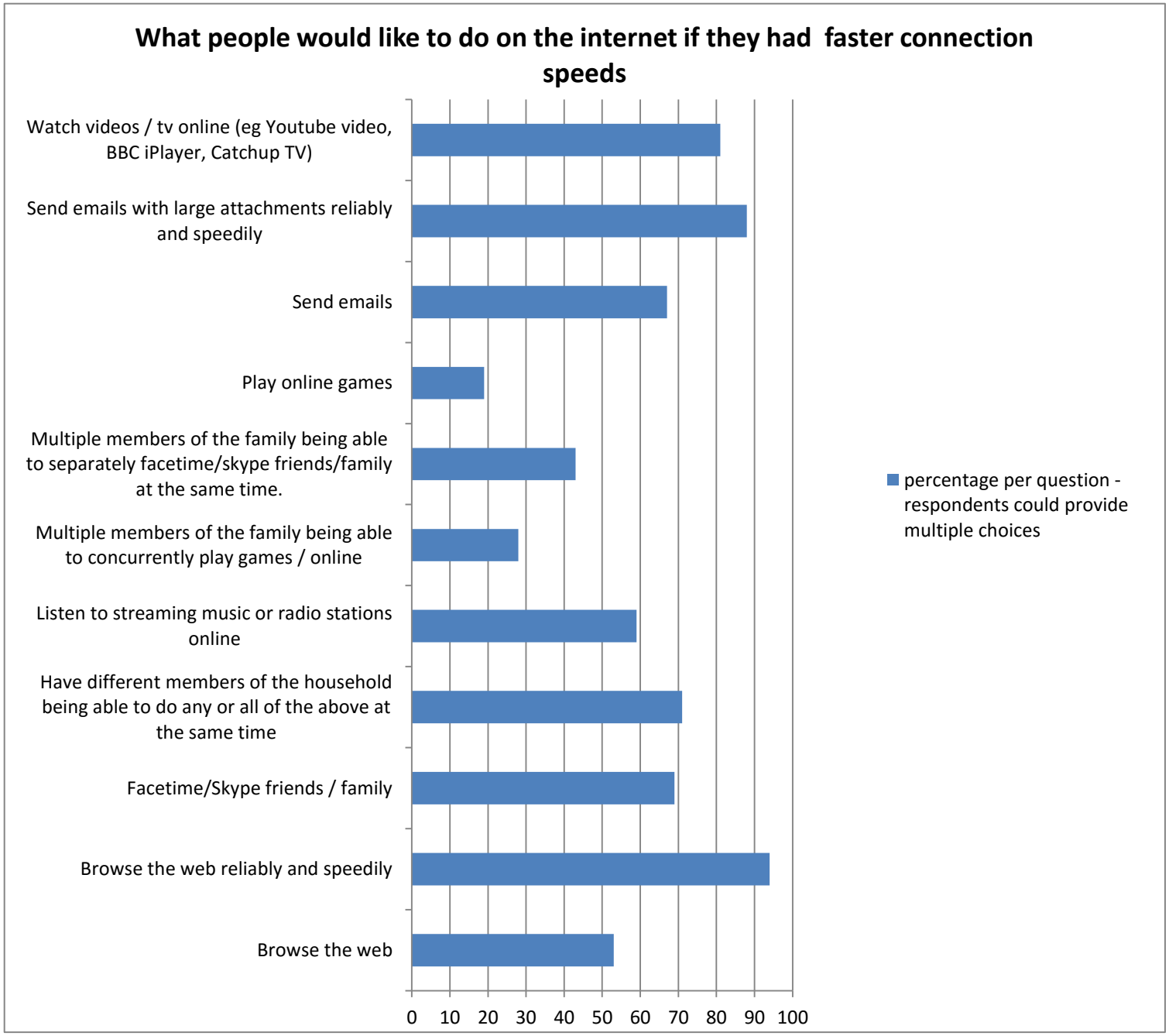
Email

16. Thank you for completing this survey. You can add any further comments in the text box below. Please press “done” at the bottom of the page or copy and paste this form and return to julienock@sup.org.uk.

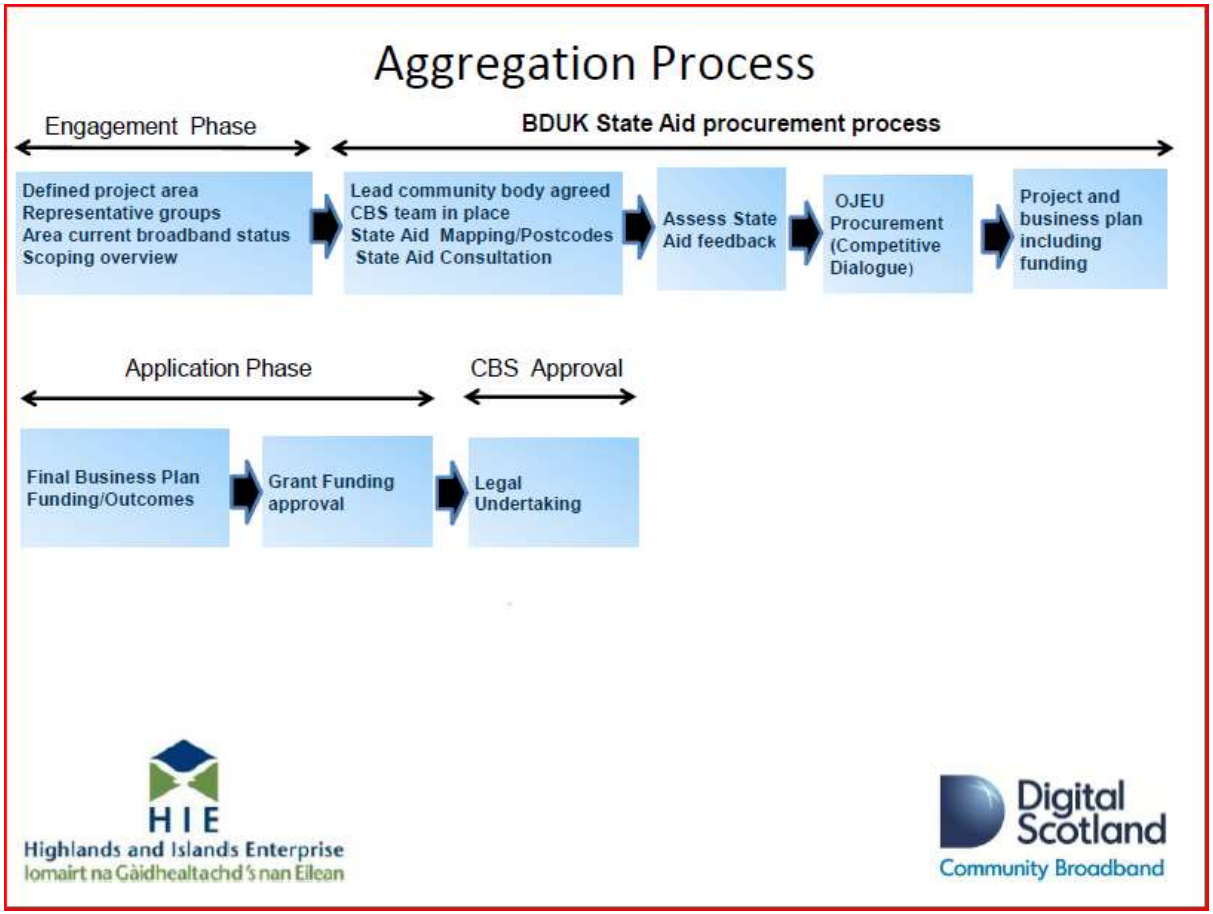
Appendix 12 – Chart: Main uses of Internet



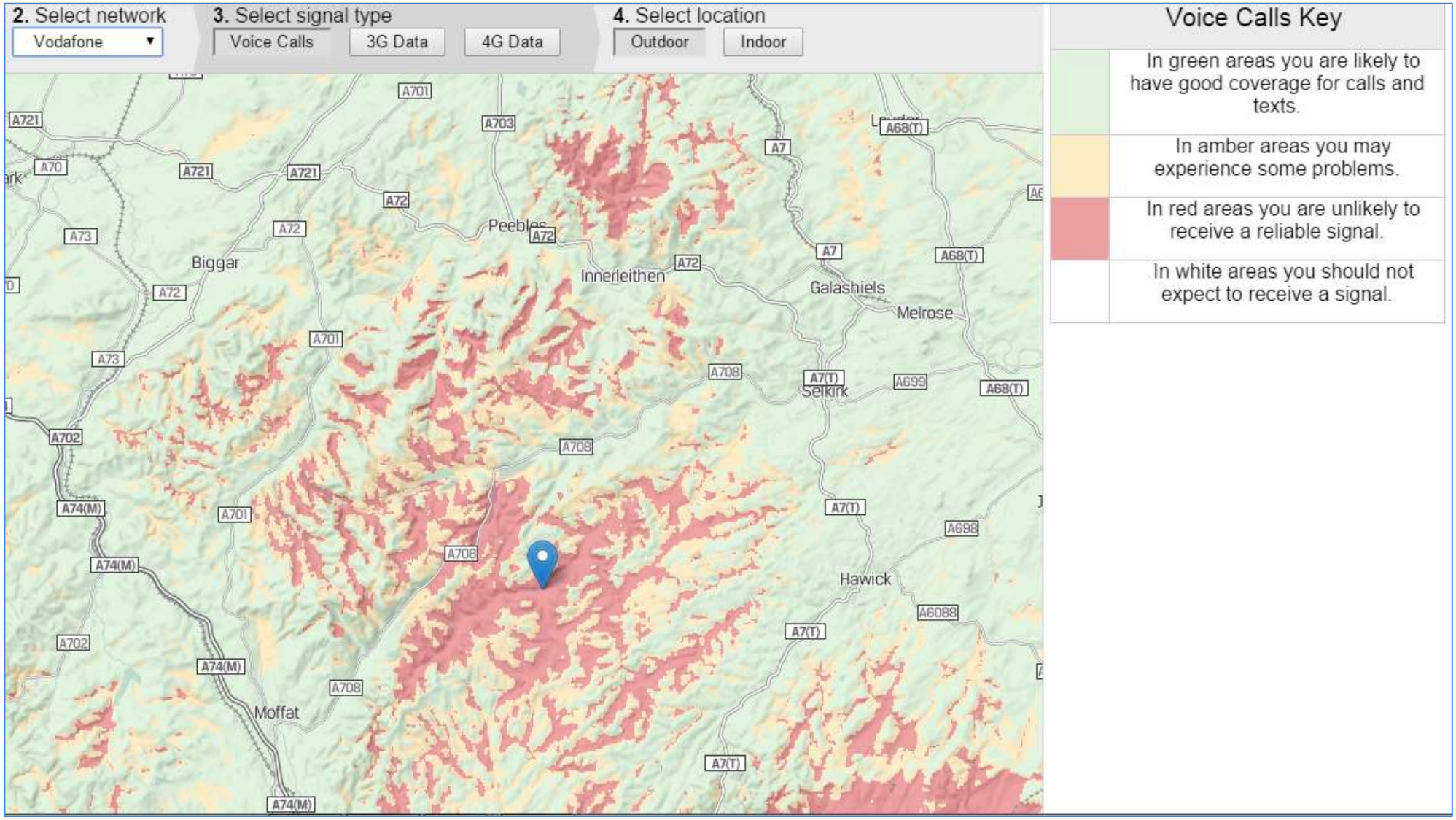
Appendix 13 Chart: What people would like to do with faster speeds.



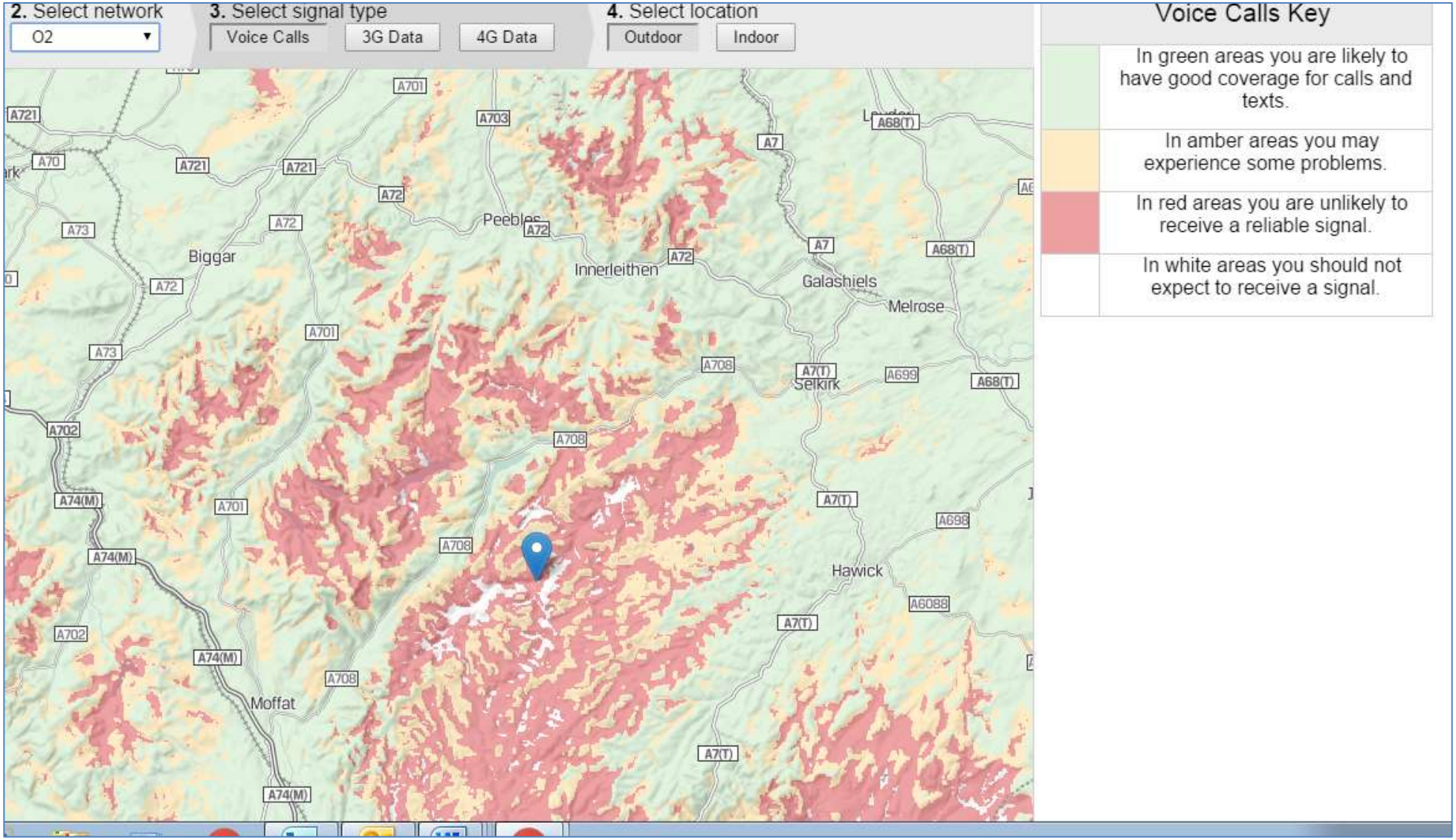
Appendix 14: Aggregation Process



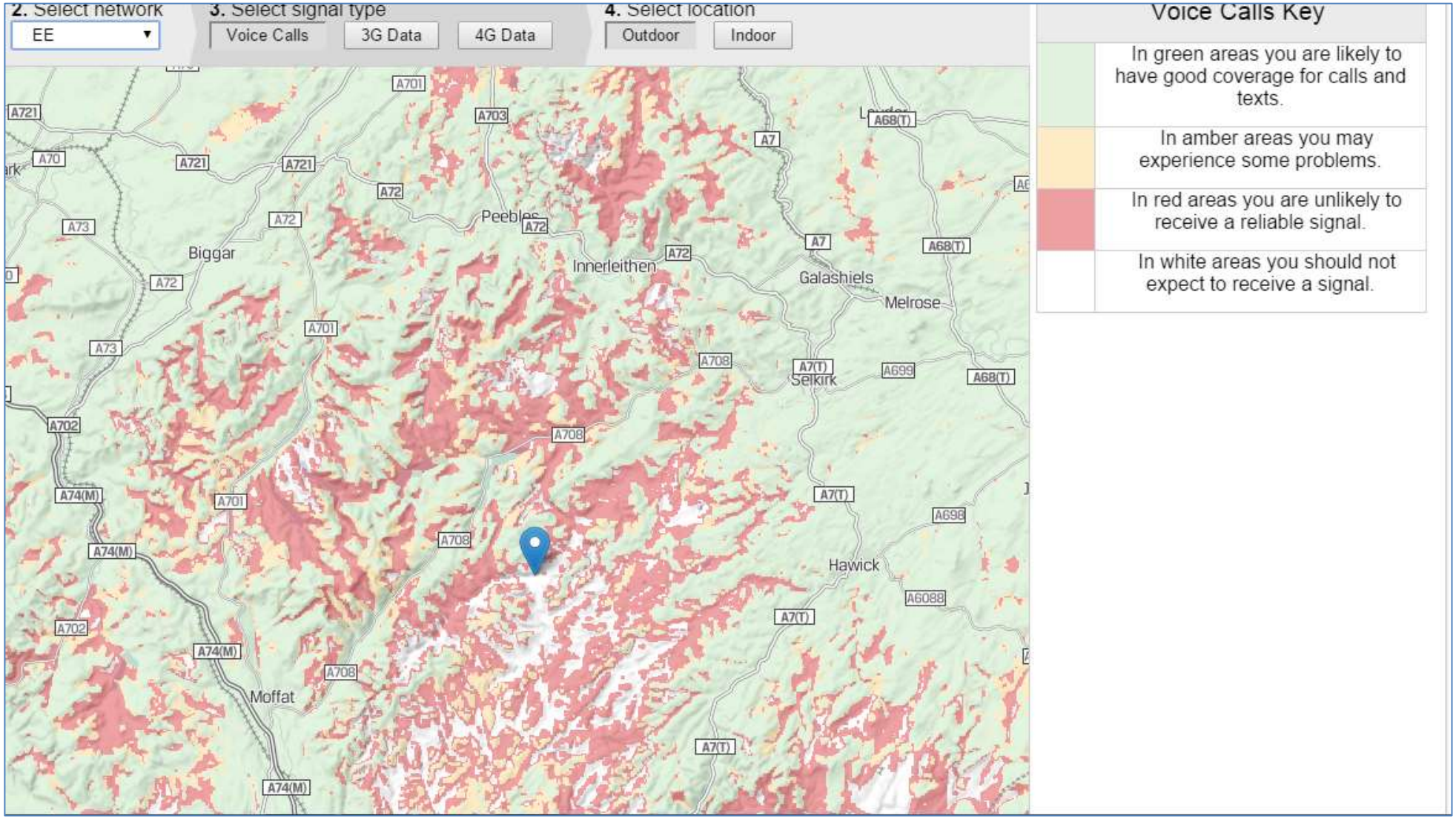
Appendix 15: Mobile connectivity



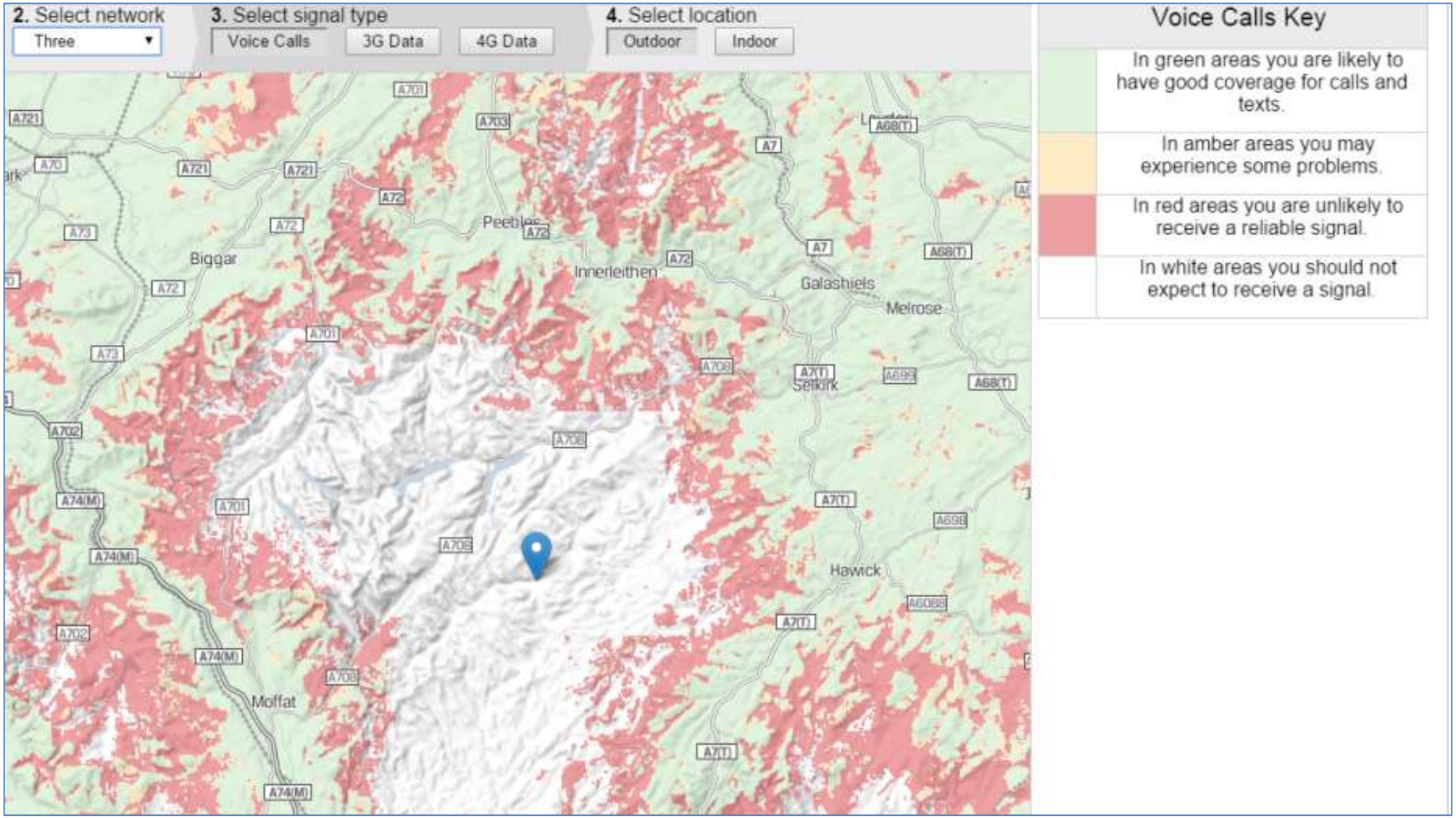
Vodaphone


2. Select network
O2
3. Select signal type
Voice Calls
3G Data
4G Data
4. Select location
Outdoor
Indoor
Voice Calls Key
In green areas you are likely to have good coverage for calls and texts.
In amber areas you may experience some problems.
In red areas you are unlikely to receive a reliable signal.
In white areas you should not expect to receive a signal.
Biggar
Peebles
Innerleithen
Galashiels
Melrose
Selkirk
Hawick
Moffat
A721
A70
A72
A73
A701
A703
A7
A68(T)
A708
A7(T)
A699
A698
A6088
A702
A74(M)

O2


2. Select network
EE
3. Select signal type
Voice Calls
3G Data
4G Data
4. Select location
Outdoor
Indoor
Voice Calls Key
In green areas you are likely to have good coverage for calls and texts.
In amber areas you may experience some problems.
In red areas you are unlikely to receive a reliable signal.
In white areas you should not expect to receive a signal.
Biggar
Peebles
Innerleithen
Galashiels
Melrose
Selkirk
Hawick
Moffat
A701
A703
A721
A70
A72
A73
A702
A74(M)
A708
A7
A7(T)
A68(T)
A699
A698
A6088

EE


2. Select network
Three
3. Select signal type
Voice Calls
3G Data
4G Data
4. Select location
Outdoor
Indoor
Voice Calls Key
In green areas you are likely to have good coverage for calls and texts.
In amber areas you may experience some problems.
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Biggar
Peebles
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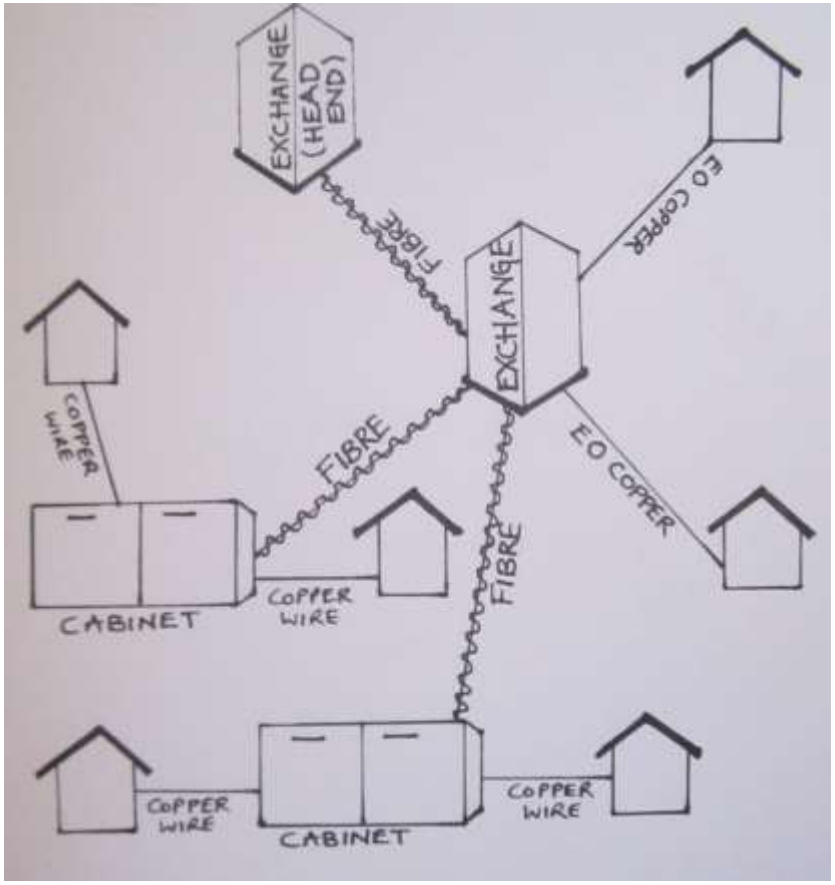
Galashiels
Melrose
Selkirk
Hawick
Moffat
A701
A703
A721
A70
A72
A73
A7
A68(T)
A7(T)
A699
A702
A74(M)
A708
A698
A6088

Three

Appendix 16: connection schematic



Digital Scotland
Community Broadband

Ettrick and Beyond Project

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southern uplands partnership
living land, living community