Connecting Devon and Somerset
Consultation Response June 25th, 2021

Improving Connectivity for Very Hard to Reach Premises.

Introduction

Covering the administrative regions of North Somerset, Bath and North East Somerset, Somerset County Council and Devon County Council, CDS is one of the most rural local bodies in England. Our delivery to date under the Superfast programme has provided connectivity to over 300,000 premises, with a further 80,000 slated for coverage under our new Superfast contracts, Gainshare or approved and in-build community schemes.

At a district level, the challenges posed by this rurality can be demonstrated by the regular deviation from original national projections of the split between commercial and subsidised build. The national Superfast programme envisaged an average split of two thirds commercial to one third subsidised build. In the CDS region we regularly see this split inverted and, in cases like the former West Somerset District, CDS subsidised build accounts for over 80% of all superfast coverage.

The advent of the Gigabit Voucher has changed the landscape to allow us to support very hard to reach premises (VHTRP) and communities in parallel with our existing contractual build, rather than being solely dependent on potential future contractual solutions. This is a very welcome development but which, in remote rural areas, surfaces new challenges around capacity within CDS, the industry and communities themselves

CDS has worked effectively with the BDUK Gigabit Voucher and previous iterations to support the delivery of community solutions in hard to reach areas not covered by existing Superfast contracts. However, there are increasing examples of areas where there is interest and enthusiasm but where the existing voucher levels provide insufficient funding to make the overall scheme viable. In instances where the gap is comparatively small, CDS has used its Community Challenge Partnership to introduce additional funding to enable the scheme to be realised.

However, as the challenge moves further to address communities comprising a higher volume of very hard to reach premises, the exponential increase in Cost Per Premise Passed (CPPP) means that more substantial contributions would be required to unlock the potential of this collaborative approach.

To underscore the need for this approach, CDS has evidence to show that in the last 12 months at least 123 voucher based projects were unable to proceed as a result of the need to top-up voucher values by over £1000 per premise. The actual range of additional funding required was from £1,000 to over £8,000, representing a total shortfall on these 123 schemes, after accounting for vouchers, of over £6 million.

It should be stressed that the above schemes are only representative of the scale of the problem, only reflecting the reality of providers who were able to share the information. The true scale of the problem is undoubtedly larger.

To address this, CDS is pursuing funding routes that would allow it to consider enabling these remote rural communities by contributing at a much higher rate than is currently possible.

Mindful of the above context, CDS has engaged in discussion with representative stakeholder groups to provide a narrative response to the DCMS consultation, set out below, which seeks to identify benefits of providing gigabit capable connectivity, particularly as seen by those stakeholders, the current and future costs of any failure to do so, a range of challenges in achieving this goal and some suggestions as to ways in which these challenges can be addressed.

Engagement with representative stakeholders

Members of the CDS team and wider partnership engage constantly with local communities and stakeholders. As part of this consultation response, CDS has taken the opportunity to contact a range of these organisations to seek views and feedback on issues which their members and service users face where there is poor or unreliable broadband and digital connectivity and their perceptions of the benefits that improvements in connectivity would bring.

Consultees have included but are not limited to the Federation of Small Businesses (FSB), Living Options, South West Tourism Alliance, the National Farmers Union (NFU), the Exmoor Hill Farm Network, Devon Association of Local Councils (DALC), a range of different scale providers and a number of communities.

General Comments

The following points summarise the common elements from almost all discussions with stakeholders. Following sections will look at more sector/demographic-specific issues;

- The lack of adequate and/or reliable broadband provision results in exclusion
- It amplifies the economic challenges for those living in often the remotest areas with lower than average incomes
- It impedes access to facilities (business, health, government, education services)
- It has an adverse impact on business development and growth.
- The ongoing cost of data and higher levels of unreliability severely reduce the viability of "stop gap" interim solutions to anything but just that.

- That notwithstanding, 4G solutions may not always be effective in rural areas due to lack of coverage. This is particularly true in areas such as Dartmoor and Exmoor, thus further reducing the options available to those communities.
- Increasing competition in the market is leading to difficulties for communities in establishing the reality of actual and planned build in their area and exact coverage at a premise level
- This can also have a significant impact on community and individual confidence in roll-out plans which increases the need for engagement
- Feedback across the board highlights that interim "stop gap" solutions do not present an acceptable outcome when compared to fibre "future proof" solutions. The national Superfast programme's aspirations for 30 Mbps download speeds, whilst prescient at the time are now clearly not going to deliver the required speeds in the near future. The current Project Gigabit proposals should provide a future proof proposition but for those currently without superfast service, the prospect of being left ever further behind is alarming and represents a serious risk of growing inequality.

Common Demands and Benefits

The CV19 pandemic has further underlined the vital importance of good digital connectivity to economic and social well-being of rural areas. Even before the pandemic, the Connecting Devon and Somerset area including district local authority areas with the lowest average wages in the UK and some of the poorest for social mobility.

In terms of economic impacts, the Connecting Devon and Somerset area has been disproportionately hit by the pandemic, with our tourism, hospitality and retail business community experiencing unheard levels of disruption.

Data from the 'Somerset Business Survey 2021 - Economic Impacts of COVID-19 and Prospects for Recovery' carried out during April and May 2021 found that 37.3% of the 1,225 businesses who responded said that digital connectivity had been a challenge for them in the last 12 months. Further when asked how their skills demands are likely to change over the next 5-10 years, 62% of respondents cited digital skills, the majority of whom cited general/basic IT literacy, whilst others cited digital marketing, management and content production.

In Devon there has been similar feedback from the business sector. In response, the County Council is funding a new £6 million programme as part of the Covid-19 Recovery Plan to help businesses with digital support and business adaptation. There are also measures to support individuals gain digital skills and recognition this spans high level technical skills and digital literacy.

The contraction of public transport over the past decade has increased the isolation of communities in areas that have proved very hard to reach in terms of digital connectivity.

Access to jobs, education, training, health and social care is harder and more uncertain for residents in these communities.

The provision of fast, reliable digital connectivity is an essential means of breaking down the barriers of isolation, strengthening community resilience and improving the lives of people in these communities.

In providing evidence for this CDS response, all respondents identified an ever more pressing demand for faster and more reliable connectivity. There was an overall sense of common recognition of the almost daily increased need, with the idea of connectivity as the 4th utility becoming an ever more accepted fact.

Ubiquitous connectivity across the region will provide stimulation for new investment and growth in our rural communities, underpin support for service delivery and community engagement – health care, online GP appointments as well as enable online access to food shopping more widely.

Some identified the tangible benefits experienced where good reliable broadband service was available. One rural contributor noted the transformational effect of good broadband (65Mbps download 15 Mbps upload) on the growth of their business over the past 6 years, including;

- Without this broadband the business would have been a sole trader but now has a team of 14 employees and around 30 sub-contractors. This has resulted in a seven-fold increase in turnover for the business which is also proud of its record in taking on and training graduates with 1/3 of its workforce under 25 years old.
- All the team share data and communicate via the internet.
- Some potential employees have been excluded from being able to work for the business because their home broadband speeds are not good enough, underscoring the importance of connectivity for social mobility.
- This business is now being restricted by existing broadband speeds. Efficiency and productivity is affected by existing broadband speeds and capacity, since the business needs to exchange very large quantities of data.
- Team members have to travel to the work base to upload data rather than being able to do so over the internet because, despite the comparatively quick upload and download speeds, it can take days to upload a batch of data to their server.
- The company is moving location this year and will be paying for a dedicated broadband line and Cat 7 cabling to future proof its business. This is an expensive investment and the business does not know if the additional costs over the Cat 5 offered by the landlords will be justified. They have noted that a lot will depend on the general speed of the broadband connections to which the workshop is connected.
- The owner points out that the speed with which a network of home workers, sub-contractors and clients can exchange data and communicate is limited by the slowest member of the team. General investment across the board in internet speeds therefore helps everybody - investing in part of the network limits the benefits to all.

Other respondents have highlighted the increased take up of on-line support offered within the public health sector, especially within the younger demographic. Due to CV19, some services such as drug and alcohol support groups were offered as an online solution. In areas where there has been a good broadband service there has been an increase in the number of people accessing these services especially in younger persons where the take up in face-to-face support was lower. Although it is too early to quantify the long-term impact of the increased take-up the expectation is that it will show better outcomes for those individuals engaging more with the drug and alcohol services.

Sector specific issues

Tourism sector

Owners of hotels and B&Bs are acutely aware that not having an extremely fast broadband connection can put-off customers and, in many cases, damage business reputations. Most tourists increasingly expect high quality connectivity and prioritise this in when making a booking. Pressure is then put on the hotels and B&Bs to meet that demand or lose bookings and repeat customers.In the recent past, accommodation providers might achieve a solution through use of 4G or satellite and then provide daily capped access, shared between guests. In 2021 few guests are prepared to accept "acceptable use" clauses which limit usage, thus the challenge for tourism accommodation providers is expanding to include the cost of providing unlimited data. One business reported using 4G with a cost of £350 per month, an expensive solution which is still unreliable in poor weather conditions. By contrast, the owner has a relative living in London who can secure the same data allowance for £20 a month.

Guests are often used to high levels of data and a very reliable service which is not available in rural areas. TripAdvisor reviews of "great but no broadband kids bored, and husband cannot connect to office" are both increasingly common and increasingly damaging

Another tourism/hospitality business reported attempting to deploy a creative wireless solution but, due to National Park planning regulations, had to opt for an underground cable solution instead incurring thousands of pounds of additional costs.

These specific examples underscore the fact that invariably solutions available to people and businesses in harder to reach rural areas not only have higher levels of associated build cost, due to distance, but often will then have other restrictions resulting from National Parks, AONB or ASSI considerations.

Where alternative technology can be deployed successfully in a compliant manner and at an acceptable cost, issues remain;

- Reliable broadband is often necessary to complete official forms such as farming declarations and submissions to the Rural Payments Agency, especially since online forms often do not save on-the-fly, so information is lost when there is a drop in connection. This can have real-time impacts including farmers' ability to move livestock or submit claims.
- Businesses using VOIP also find this unreliable without good broadband. This can require a business to maintain an otherwise redundant landline to ensure voice calls, thus significantly increasing monthly outgoings on connectivity.
- Businesses also identified problems with card readers where unreliable broadband meant they could not take payment and, in some cases, are reliant on the honesty of customers returning to pay later
- One business noted it was paying for both an alt net and Openreach infrastructure as backup to try to mitigate the problems of reliability. The business works for international clients on demanding deadlines and could not rely on the fixed wireless service alone.

Other concerns raised include;

- One business noted that upload speeds are most important so only a synchronous, gigabit capable infrastructure offered any viable solution
- Businesses noted that attempting to operate in rural areas with poor internet connections was particularly challenging during the CV19 pandemic. Trying to stay in contact with employees was difficult and poor internet connection made matters more stressful.

Agriculture

Improved connectivity is increasingly helping farmers save money through tracking, monitoring, feeding, weather monitoring, buying and selling stock. For the transportation of livestock, it is now necessary to register the livestock online before any road movements. Consequently, where there is slow or unreliable connectivity, there can be immediate economic impacts, with farmers losing sales opportunities

Rural diversification is increasingly reliant on high quality very fast broadband. Since very few farms these days do not have some element of diversification, lack of access to useable connectivity has the potential to undermine the overall viability of any given farm

Improved connectivity is allowing greater social interaction for farming communities (that would in the past have experienced social isolation). This has been especially true during the CV19 pandemic where face to face contact (albeit on Zoom or Teams) has been made possible through broadband – and greatly appreciated.

Some farmers also expressed interest in increased training and education on alternative options for digital connectivity technology where full fibre to their farms is not currently an option. Satellite options needs to be presented to farmers, as well as additional training and digital-upskilling to allow them to optimise the benefits of whatever technology they can implement.

(**See Appendix B – Redlynch Agricultural Engineering case study**)

Vulnerable groups

Good digital connectivity has the potential to be enabling for protected groups including people with disabilities, many of whom can be more isolated than much of society. It can be more difficult for disabled people to travel, and access services. Therefore, also being excluded due to poor connectivity can amplify these barriers.

Organisations supporting disabled people are particularly aware of the impact of the pandemic on protected groups. During lockdown there has been a requirement to deliver services digitally since many service providers couldn't see people face to face. However, this was problematic in areas where there was poor connectivity, examples including;

- E consult System - to contact their GP the user can enter details of their query for the GP into an electronic form. However, it is necessarily a relatively comprehensive form to

complete and does not save so poor connectivity considerably reduces its effectiveness. It is particularly difficult to complete the form on a phone.

- Benefits - Universal Credit is almost all online. If a user struggles to access data completing these forms can be an issue because applicants need to be online throughout. Many people who cannot afford Wi-Fi or unlimited data on phone use libraries to access connectivity. However, during the pandemic libraries were shut. For some, this became a cause of significant anxiety because any recipient who does not report regularly can face financial sanctions.

- Some assessments which are done face to face can also be offered via video assessments. These assessments can be relatively simple and do not require travel but cannot be conducted where connectivity is poor and this can result in assessment delays which, in turn, impact on the services people receive.

- Other services which are not reliably available in areas with poor connectivity include use of screen reader kits for the visually impaired – providing access to daily newspapers for example – and services for British Sign Language users where interpretation is much more difficult if access to video is compromised by poor connectivity.

Finally, some protected groups are adversely affected if unable to connect to others with shared experiences, exacerbating a sense of isolation and negatively impacting on mental health and well-being. Anecdotal information suggests there can be particularly adverse impact on members of the LGBTQ community.

Health and Social care

Respondents from the health and social care sector have articulated that the need for good broadband speeds is vital to provide services to people in rural areas effectively.

A high proportion of care providers, care homes and clients in rural areas suffer from poor internet speeds which has a huge impact on the ability for organisations to carry out their role and for clients to be supported. This also has an impact on clients both in care homes and those people being cared for in their own homes.

Clients are often vulnerable and poor broadband speeds increase their isolation. However, if access to reliable digital connectivity was more readily available it would provide life-changing benefits for clients. For example, people living in their own homes could, in theory, have access to equipment similar to Alexa which would enable them to quickly call for help in the event of a fall or other emergency. Additionally, care givers working with clients in their own homes often need good connectivity to use certain pieces of equipment such as handheld monitoring devices. This can hinder care in rural areas where digital connectivity speeds are poor. In more urban areas, even if the client does not have a good connection, care givers can access "BT hot spots" which is not possible currently in very hard to reach rural areas.

The CV19 pandemic has further underlined the importance of access to reliable broadband to the health and welfare of vulnerable groups. A talking café project in the CDS area that supports people with mental health issues is now online in response to the CV19 restrictions. However, if people are unable to access it because of low internet speeds it can have a detrimental impact on

their lives. This experience is exacerbated in larger households when several people are trying to access connectivity at the same time, and these are often the most disadvantaged.

Some care home providers in rural areas report they are unable to fully support those in their care because of poor broadband speeds. This has a huge impact on not only the value for money they can offer their residents but also their health and wellbeing.   For example, where care homes have low speed broadband they are unable to support medical intervention such as monitoring devices. As a result, clients must be admitted to hospital which increases pressure on NHS capacity.

Local Government

Devon Association of Local Councils (DALC) are aware that, following Government instructions to hold all Council meetings remotely, a few of the smaller councils were unable to do this due to poor connectivity. Conversely, Parish Councils who were able to hold online meetings found an increase in engagement from the public.

However now that Parish Council meetings have to be face to face meetings for Councillors, many are keen to capitalise on the learning over the last year and develop hybrid meetings, with the public joining remotely. Clearly, some councils cannot do this, where venues are not equipped with capable broadband and this is now seen as reducing the ability for public engagement at a local council level.

This is an emerging view, where poor connectivity in the hardest to reach places is now seen as having a detrimental impact on democratic engagement. In doing so, this raises the spectre of democratic inequalities at a community level. Whilst some local parish councils have investigated available voucher schemes, many of the aforementioned barriers continue to have an impact on local democracy until solutions can be found.

Barriers

Viability and access to financial support remain a central issue and a growing one as delivery looks to build to VHTRPs. This is, in part, ameliorated by the Gigabit Voucher and may, in the medium term, also be addressed by Project Gigabit.

Capacity, nationally, regionally, and locally, remains a key barrier to delivery at pace, with provider and sub-contractor resources needing to increase staff numbers to keep pace with contract and community demand. Since there is a finite pool of professional telecoms technicians, planners and engineers within the UK, attracting and retaining staff is an ongoing industry-wide problem.

Training up new generations of people to fill these roles takes time and, whilst both providers and Government are addressing the issue, there remains a shortage. This results in a highly competitive market for skilled staff with many providers reporting constant approaches to their staff from recruitment agencies seeking to fill other competitors' vacancies in the region. Anecdotally, the situation is further compounded by the rural nature of the CDS region, with travel to work times increasing as recruiters widen the geographical search for talent.

Perhaps most significantly, these capacity issues are increasingly surfacing real tensions between volume delivery under Superfast contracts and demand-led, tactical deployment to VHTRP communities. Often the most appropriate provider to deliver a demand-led project is the one whose build is adjacent to the potential community but for whom, the delivery to that community would introduce an inevitable delay to the wider contractual build. This problem becomes more acute where the provider is asked to consider multiple Demand Led Projects (DLPs) along its contractual routes.

The alternative is to foster a wider pool of smaller, tactical providers with the skill and appetite to in-fill, perhaps striking partnership agreements with the volume provider in the region to access backhaul through the network in build. Failing to do either risks leaving any of the VHTRP communities behind and ensuring even higher Cost Per Premise Passed (CPPP) levels for subsequent, retrospective builds.

Further investment in training a skilled workforce and identifying future work which such personnel could move on to undertake once broadband/ digital connectivity secured remains a key challenge.

Whilst always a potentially dominant aspect, the importance of wayleaves in VHTRP builds often takes on a new pre-eminence. When working with public, charitable, and other major landowners, broadband providers report that it is often unclear how to gain wayleave consent, let alone achieve it. Landowners mentioned include: National Trust, Duchy of Cornwall, and the Forestry Commission. (Providers have also raised issues around inconsistencies and slow progress when working with these organisations). Overall, providers feel they would greatly benefit from national guidance. Additionally, some alt-nets have asked for clearer identification of all areas which are in public ownership as they are keen to test alternative mapping approaches which begin with those available routes and then build the design accordingly.

A number of providers expressed the view that effective working relationships with local authorities is essential when planning and building local networks and that relationship with local bodies is becoming ever more critical in the deployment of gigabit capable networks (as distinct from earlier Fibre to the Cabinet (FTTC) builds).

Consultation with stakeholders confirmed that there remains considerable need to develop demand-stimulation activities that continue to promote the importance of good connectivity, such as the Devon County Council funded Digital Advantage programme. Since longer term poor connectivity is already exacerbating the rate at which young people leave rural communities for more urban areas to access better speeds (and the resulting impact on community demographics), demand stimulation and engagement have a part to play in reassuring younger residents in the region of the planned roll-outs.

Other issues

There are ca. 41,000 premises in the CDS region that will remain at sub-superfast speeds after allowing for all contractual and other subsidised build in the region as well as all commercial build accepted in the recent CDS Open Market Review (OMR) refresh at the beginning of 2021.

CDS has analysed the locations of NGA white premises (premises which do not have a broadband service of at least 30 Mbps or credible commercial or publicly subsidised plans for such a service) in the Heart of the South West LEP geography of the CDS region.

Naturally, one of the main problems in delivering to the "hardest to reach" premises in a rural area is simply their distance from other premises. Higher density premises can help to significantly lower the cost of delivery to premises on the extremities of a settlement. Conversely, the opposite holds true in scattered communities in very hard to reach areas. An analysis of the distances between these NGA white premises reveals that around 3,400 premises more than 200m apart.

With indicative fibre build costs, averaged across the full range of build methodologies, currently at £15/ metre, the cost of reaching each of these premises would be around £5,750.

Using this approach to defining VHTRPs, around 10% of all remaining premises in the region constitute VHTRPs with the average premise requiring in excess of £4,000 additional subsidy, over and above the current value of the Gigabit Voucher. It should be noted this approach has been used for illustrative purposes. It is acknowledged that a variety of factors will influence how hard to reach premises may be and this approach considers but one of many potential factors.

As an example of a solution, Wessex Internet have always shown a desire to connect whole communities, including in its contract with CDS and have historically been successful in this. This type of approach acknowledges that it will lead to an overall increased Cost Per Premises Passed (CPPP) for the footprint being implemented.

However, if the coverage is reduced by removing the VHTRPs, to the benefit of a lowering of the CPPP, it will create a gap in the coverage that may make it impossible for another operator to cover, especially at some point in the future

To date, BDUK's strategy for Superfast, has ensured coverage rates increase more quickly than would be achieved with a whole community approach, and delivered lower CPPP, and can be regarded as being effective in this respect, particularly when seen in the context of national percentage coverage targets. However, this strategy will now not meet the community expectations if applied more broadly to Project Gigabit.

Communities do now have an expectation (as it was published as a Government proposal) that Gigabit Capable and Full Fibre broadband solutions are to be implemented. To leave individual premises out will be very hard to justify politically, given that much of the coverage can be delivered by utilising a more holistic approach to the costs and using a wider pool of premises to deliver an acceptable cost average.

Several providers have shared the fact that they currently lack sufficient rural experience to inform their design methodology, therefore current designs can often be primarily informed by their urban experience. This has a tendency to impact design and cost adversely in two ways;

- Firstly, rural areas are much more prone to additional costs around tree cutting, collapsed or silted ducts, road closures, D-poles or inaccurate PIA records indicating potential available infrastructure which, on survey, turns out to be unusable Direct In Ground (DIG) cable. This all leads to increased costs at the detailed design and planning stage (M0) (or equivalent).
- Secondly, designs can often be predicated on logic from previous technologies, where providers model to traditional exchange boundaries. This factor can impact value for money where it involves provision of multiple spine routes. Additionally, it can have a real impact on the viability of voucher based schemes if it requires multiple Pre Registered Packages (PRPs) to deliver to one community.

(**See Appendix A – Withypool & Hawkridge case study**)

We are also seeing increasing instances where interplay with Universal Service Obligation (USO) is having unintended negative consequences. This is most often experienced where the viability of a demand-led project is threatened by an unpredicted parallel USO scheme which delivers to a proportion of the premises in a PRP but not all. The reason for the impact tends to be that the USO scheme will address the cheaper premises and in doing so rule them ineligible for voucher support. This leaves the rump of the more expensive premises still to be delivered but without the requisite voucher support to do so. This can be hard to spot until it's too late as many residents will understandably fail to distinguish between USO delivery and a voucher-based scheme, especially if it's a Community Fibre Partnership (CFP).

Contract periods of two years negatively impact on the potential effectiveness of the Gigabit Voucher in cases where an individual cannot upgrade their package and therefore needs to run two contracts in parallel. This issue is most keenly felt by alt-nets who cannot offer packages from household ISPs and therefore cannot offer this migration path. A number of alt-nets say changing legislation to allow migration between different ISP contracts would be the most significant act to encourage higher participation in voucher schemes and, in many instances, make the difference between a scheme proceeding or collapsing.

An alternative way to remove this barrier to take up would be to move to more of a Total Homes Passed (THP) model, whereby the requirement to take a service would be dropped entirely. This is obviously antithetical to the current underpinning strategy of the Gigabit Voucher but is worthy of mention.

Paradoxically, a number of smaller alt-nets have argued to retain the requirement to take a service, pointing out that their business models require take-up of around 80% to make their builds viable in the long-run. Some middle-ground where individual PRP's require a threshold of take-up (say 70% to 80%) to proceed might be a compromise worth considering.

Conclusion

All feedback underscores the increasing urgency for delivery to VHTRPs and the growing direct and indirect costs to businesses and residents of sub-superfast connectivity in an increasingly

gigabit-centric world. There was not one respondent who indicated either satisfaction with or resignation to maintaining the status quo. Nor were there any respondents who saw technologies like 4G or Satellite as anything more than potential interim, stop-gap solutions.

Delivery of gigabit connectivity to all parts of the CDS region is vital to support the Economic Recovery plans of partner local authorities and is, along with labour shortages, the key issue constraining businesses from being able to bounce back, support young people and their learning, and deliver on our shared low carbon ambitions.

There is no one single solution and a flexible response to local needs and conditions is therefore essential to overcoming some unique challenges. Areas that we highlight include;

- The need to encourage a more collaborative approach in the market to ensure a holistic joined up approach to tackling the challenges posed by VHTRPs. This needs to involve providers working on Superfast contracts, fully commercial operations, those delivering Gigabit Voucher schemes as well as the USO and Project Gigabit
- The need to examine headroom withing existing contracts and the opportunity to use that to introduce additional funds to allow those contracts to reach deeper
- The growing need to foster additional players in the market in the region. especially those capable of delivering tactically and willing to deliver at a community scale in VHTRAs
- The need to encourage delivery partnerships, between tactical delivery partners working with larger providers to extend large contractual roll-out to nearby communities to reduce the impact on the pace of delivery of those larger contracts
- A pressing need to resolve the current confusion caused by conflicts between USO, Superfast contracts and Gigabit Vouchers projects. This confusion needs to end to ensure clarity for residents, efficiency and value for money
- The need to encourage network designs that are optimised for rural full-fibre and that deliver maximum whole-community coverage, rather than simply building on the existing design methodologies of providers that are rooted in different scales of deployment and technologies
- The need for further investment in take-up campaigns and support to help businesses and residents realise the full economic and social benefits. This needs to happen in parallel and sequence with the deployment of gigabit capable infrastructure so that both complement each other. Both need to be set in the context of a wider, co-ordinated framework of digital skills and utilisation advice and guidance that is properly resourced.
- The need to encourage and support ISPA and INCA in expanding the range of ISPs available to customers on the growing alternative network infrastructure in the region
- The need to expand the range of support at a district level for communities developing their own community-led solutions, especially through the increase of staff capacity in District Councils
- The need to establish a radically more agile approach to moving premises in and out of coverage to react to the changing realities of increased commercial and voucher funded build across the region

All the evidence points to an increasing need for Government and wider public sector investment in digital connectivity in rural areas and that the Very Hard to Reach Areas (VHTRAs) are at risk of being left behind without it. Gigabit solutions are needed to remove the digital divide and support the levelling up agenda. This seems particularly true in the Agricultural and Hospitality sectors but applies across the board.

There is an important and growing role for local programmes to play in ensuring the VHTRAs are not forgotten, both through the management of large contractual deployment as well as support for parallel community solutions through voucher supported projects.

It is fundamental to our role that we ensure equality of access to job opportunities, learning and skills and support all disadvantaged parts of our population. Social mobility is one of the key issues we are addressing in Devon and Somerset and future proofed connectivity is a foundational part of the solution.

Ultimately, in this context, we must be clear that the very high cost premises of today's VHTRPs risk becoming the simply unaffordable costs of tomorrows impossible to reach premises (ITRPs) without a strategic approach to addressing them now.

Appendix A – Withypool and Hawkridge case study

The communities of Withypool and Hawkridge on Exmoor currently have limited access to useable broadband, though the picture does vary within the parish. The village of Withypool itself is served by a cabinet courtesy of CDS Phase 1 and this provides superfast coverage to approximately 60% of the core village with speeds between 30Mbps and 80Mbs.

The community has been examining a whole community solution to cover the whole of the Civil Parish but are now faced with a number of complications with their initial choice of supplier, Supplier A.

The parish is served by five exchanges which are, in turn, fed from three distinct head-ends. As a result of Supplier A's standard design methodology being based on exchange boundaries, even if this approach were applied to parent exchanges the community is likely to require three distinct voucher projects, an unexpected and confusing aspect for the community organisers.

Because of this, the available funding is also likely to be impacted. The part of the parish containing the critical mass of properties (in Withypool village itself) also has properties that are already in receipt of superfast. As we have seen across the region, these properties are a much harder sell to involve in voucher schemes, because of the need to commit to taking a gigabit-capable service. Many residents cannot or are not prepared to do so.

Even assuming 100% take-up vouchers, the split between voucher projects means that the projected surplus on, say, voucher project A could not then be used to off-set the projected deficit on voucher projects B and C as the Gigabit Voucher scheme requires individual projects (formerly PRPs) to stand on their own financially.

The final challenge relates to spine. We are aware that, through the coming Gainshare build, Openreach will be bringing the spine connection up the Exe valley to within a kilometre or so of the parish. However, as this work is planned but not delivered, planners from Supplier A working on the initial costings for the Withypool voucher projects will not be able to take this into account and will budget at least one of the quotations for the full spine required to reach back to the current closest point of network. In doing so, this is certain to massively inflate the initial quote, although these costs will not actually be required.

The only way to avoid this situation within a Supplier A solution is to pause any initial approach until the Gainshare project infrastructure is built, tested and live, adding a further 9 - 12 months to the process.

However the parish of Withypool and Hawkridge is also adjacent to existing Supplier B fibre deployment at East Anstey and the extremity of Stoodleigh. This proximity offers a different approach to providing the connectivity; and Figure 1 illustrates the proximity of the parish to the Supplier B deployment.
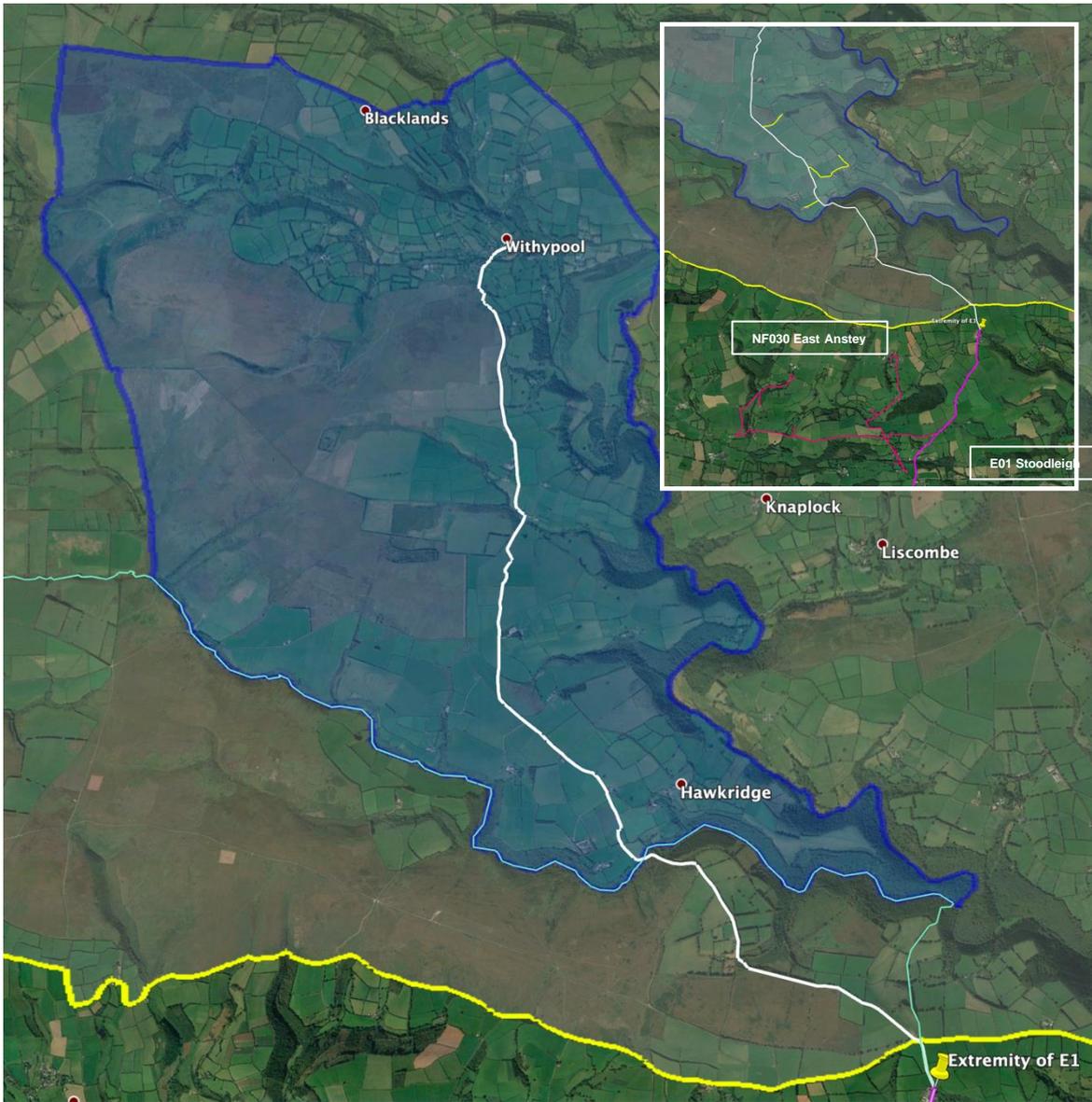
Figure 1 Parish of Withypool & Hawkridge with view of proximity to East Anstey inset

Figure 1 illustrates the 10km backbone from the nearest Supplier B fibre passing Hawkridge and going on to the centre of Withypool.

Figure 2 shows the additional laterals required to pass the majority of premises in the parish by fibre. These amount to approximately 3.85km around Withypool and 2.25km towards Hawkridge and properties along the road on towards Withypool.

Figure 2 Backbone in white and laterals in yellow

Figure 3 illustrates an option to 'pass' other outlying premises by using gigabit wireless; it demonstrates the potential to add final drops to six locations using two Terragraph gigabit radio solutions each supporting three customers.
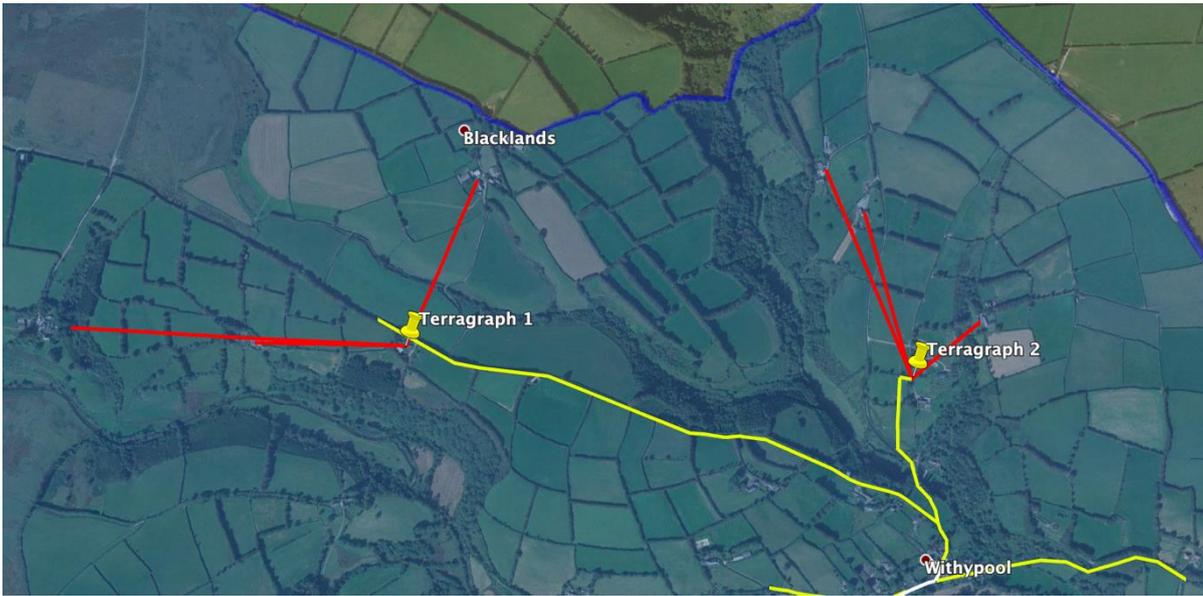

Figure 3 The use of gigabit wireless to 'pass' additional premises

Redlynch Agricultural Engineering Bruton, Somerset

"For the future, it is essential we have an ultrafast connection like this to allow people to do their jobs."

Redlynch Agricultural Engineering Ltd offers a comprehensive range of farming machinery to farmers and contractors across 3 counties – Somerset, Wiltshire and Dorset.

From its main site in Bruton Somerset, the company employs specialist teams that include sales, parts, support engineers and administration. The business has kept ahead of how farming has evolved over the years and has quickly adapted to developing technology and ever-changing working practices. Its customers are looking for the best return on investment and rely on Redlynch for its local expertise and knowledge.

Wessex Internet connected full fibre to its Somerset site in 2019. Prior to this, Redlynch had experienced a poor internet connection. The Company Secretary explained how this had impacted the business.

"Our engineers experienced slow download speeds whilst running diagnostic tests, so that it took longer to find the root of the problem, which in turn meant more waiting time for customers and less bookings per day. Staff using the online stock systems found the service slow with recurrent glitches. There were times when they had to limit the number of users at the same time, and the team was faced with several delays to printing items due to the printer running off the server. Everyone found the connectivity poor, very slow and frustrating."

Managing Director Nick Heal took responsibility for getting the business connected to full fibre broadband via local provider Wessex Internet. The company found the actual installation to be very efficient and it didn't cause any down time to the day-to-day operations.   When asked if there were any noticeable differences once the new connection had been installed the Company Secretary said:

"Generally we have a much better connection which has helped to speed up internal processes and allows wider usage.

The biggest impact is that it has helped us to implement and improve new online systems and programmes.   During the pandemic we went paperless, and as more people were working remotely, we realised quickly how much more reliant we were on our servers and the internet. For the future, it is essential we have an ultrafast connection like this to allow people to do their jobs."

The company advises anyone in the same position as they were 2 years ago to get a better internet connection as soon as they can as it's vital for businesses today.

If they could encourage the Government to do one thing to help rural businesses like theirs their suggestion would be:

"Offer funding and improve the infrastructure. Give support to small/medium sized businesses to improve their Internet. It should not just be available to those who are able to pay for a private line to be installed."

https://www.redlynchtractors.co.uk