# DRAFT Broadband Strategy

# 2019-22

## Content

## Foreword by Leaders

## of Herefordshire Council and Gloucestershire County Council

High quality digital infrastructure is vitally important to the economic and social vitality of Herefordshire and Gloucestershire. Fastershire has achieved a huge amount to date and should the Councils' to simply continue to manage out their existing contracts, we would see superfast broadband coverage rise to 96% and 97% in Herefordshire and Gloucestershire respectively by the end of 2021. However, we want to go beyond that.

Fastershire has already worked innovatively to get to where we are – this includes working with suppliers to deliver ground-breaking approaches, undertaking procurements that are first to market, structuring contracts to ensure difficult to reach areas are not left to the end and taking a risk with new suppliers as they grow and develop. As a consequence the levels of full fibre access across both counties which is already unprecedented at 21% and 13% will extend to 56% and 45% of the properties exclusively in our rural areas by 2021. In fact, if you have benefitted from Fastershire to date and you are located in rural Herefordshire and Gloucestershire you live in one of the best digitally connected locations in the world.

That said, we remain determined to bring the same benefits to as many of the c. 10,700 premises that currently sit outside of any current plan. As such, the councils are committed to continue working together over the next three years to achieve even greater fixed broadband access in collaborating with national government to get the best results possible. Given that commitment, we have deemed it appropriate to refresh the Fastershire Broadband Strategy to cover the period 2019-2022.

Whilst the Government's aspirations have changed, in the absence of a successor to the National Broadband Scheme State Aid framework until at least the end of 2021, there is a policy and implementation vacuum which restricts what public bodies are able to do to support further delivery. Added to that is a renewed market interest in investing in full-fibre deployments in the more commercially viable areas. The easy thing to do therefore would be to maintain a watching brief and assess where the market may fail to provide full fibre connectivity at some future date. The two counties via Fastershire, have never sought to take the easy option and will instead double down on reaching those areas that are yet to benefit albeit within the confines that exist.

We agree with central government that the future of digital connectivity is full-fibre and pervasive mobile coverage with ultimately converged networks providing seamless connectivity between fixed and mobile access. However, that picture is some way off and largely dependent on the market. Therefore, this strategy sets out a practical set of actions that we as local authorities have the power to influence in the short term that will continue to prepare the ground for the long-term aspirations. It prescribes through the new Stage 5 what we will do within the state aid rules to extend Gigabit Capable infrastructure to the furthest reaches of both our counties. Added to our existing fibre footprint, this will become the bedrock for the digital future of Herefordshire and Gloucestershire.

We are also committed to reconsidering the strategy again in the medium term once it is clear how central government intends to proceed and how far commercial players' own investment will reach. But for now, the focus remains on enabling those residents and businesses we have to date been unable to support to achieve superfast speeds and as far as possible by helping these localities to achieve Gbps capable services.

# 1. Executive Summary

Enhanced digital connectivity will have far-reaching implications for Gloucestershire and Herefordshire, where all residents and businesses will feel the benefits from change. Improved digital connectivity will enrich people's lives and improve the living standards of all age groups.

Digital connectivity will also reshape the way we secure economic growth. Businesses across Gloucestershire and Herefordshire have the ability to seize the digital opportunity to integrate new processes and offer new services. They should attract new talent through the offer of more flexible and remote working opportunities. The area will draw in new high value businesses, who are attracted by our digital connectivity offer and great lifestyle for employees.

On-line public services are advancing in their functionality, therefore better digital connectivity is important for residents and business to interact with services in an accessible and cost effective way. By using digital can mean less need to travel in reducing people's carbon footprint to access services.

As technology, aspirations and opportunities change, the vision for broadband in Herefordshire and Gloucestershire for 2019-22 is outlined below:

***Fastershire will enable all residents and businesses in Herefordshire and Gloucestershire to access the connectivity they need and encourage people to use faster broadband to do more online, boost business growth and achieve their potential.***

How this will be achieved is described in the following table.

| Stage | Title | Activities to 2022 |
|---|---|---|
| 1 | Commercial Delivery | Actively monitor the market's intention to provide both superfast and full-fibre connectivity. Encourage and work with commercial providers to use their own investment to extend access to full fibre broadband, in particular by promoting the availability of backhaul options delivered through Fastershire funding to date. Encourage the local planning authorities to adopt innovations in planning policy as they relate to full fibre provisioning of new development sites and support communications providers in their interactions with the local authorities. |
| 2 | Fastershire-wide Contract | Promotion of the existing broadband delivery enabled through Fastershire contract (via BT). Extract funds from those contracts through "clawback" for reinvestment. |
| 3 | Regional Contracts | Manage the Gigaclear full-fibre rural contracts to their successful conclusion having maximised the opportunities to generate the greatest possible coverage. Conclude the BT urban contracts and explore opportunities to use the contracts as vehicles to stimulate additional full-fibre investment. |
| 4 | Small Cluster Contracts | Manage the Airband FTTP contracts to their successful conclusion having maximised the opportunities to generate the greatest possible coverage. |
| 5 | Fastershire Community Broadband Grant and | Launch a Fastershire "Dynamic Purchasing System" through which localities can aggregate Fastershire grants to pay for Gbps capable infrastructure to be provided to their locality. |

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| | bespoke grant schemes | Launch Phase 2 of the Marches and Gloucestershire Business Grant (MGBG) helping individual and groups of businesses to procure the digital connection services they need and use the MGBG to stimulate incidental Full Fibre build. |

## 2. Objectives and Indicators

To deliver the vision of the Broadband Strategy 2019-22 the objectives are as followings:

**Coverage** – to continue to increase superfast broadband coverage across two counties through a mixture of contracts and grants, opting from Gbps capable or full-fibre broadband where value for money allows.

**Inclusion** – to support residents and businesses to make the most of the broadband network through skills training, awareness raising and enabling community led schemes.

**Innovation** – to continuously drive innovation in addressing the ambitions of broadband coverage in working with partners, funders, suppliers and the community.

**Monitoring** – to ensure the maximum results from the work of suppliers by monitoring the contracts and driving value for money in deployments.

**Partnerships** – to productively work with suppliers, parish and town councils on effective communications, with local authority departments to co-ordinate the approach to deployment, and planning authorities to ensure new premises have broadband connectivity.

**Key Performance Indicators – Broadband Strategy 2019-22**:

- That 99% of premises[i] in Herefordshire and Gloucestershire will have the capability to connect to Superfast Broadband[ii]
- That 60% of the premises[iii] located in the rural areas[iv] of Herefordshire and 50% of those in Gloucestershire will have the capability to connect to Full Fibre Broadband[v].

## 3. Fastershire Achievements to date

### 3.1 Background and context

Fastershire is a formal partnership between Gloucestershire County Council and Herefordshire Council, with the council's coming together to address the challenges of broadband availability across both counties. The project encourages and enables commercial suppliers to invest in broadband networks by using a range of mechanisms to improve the feasibility of deploying infrastructure in areas that have proved to be unviable. Funding is provided by the two councils and match funded by national government who share the ambitions of extending broadband access.

Over time, the emphasis of the project has changed. The first contract with BT in 2012 was designed in such a way that forced the supplier to reach rural areas at at-least the same time as deployment in more urban areas. This was difficult at the time but reaped rewards in significant rural coverage – with Herefordshire's starting point of less than 1% fibre coverage in 2012 the figure reached 87% at the end of the BT contract. For Gloucestershire the starting point was different, but saw almost 80,000 premises reached by superfast broadband.

Whilst BT used their FTTP programme as part of the first phase, the contracting of Gigaclear in 2015 for the Cotswolds was a national marker in full-fibre deployment, creating a step-change in ambition and approach for rural coverage. However, some of the counties' urban areas remained without commercial provision and therefore the counties invested in additional superfast broadband coverage in Hereford, Cheltenham and Gloucester meaning Fastershire was no longer simply a rural programme.

Whilst funding has primarily been between the two councils and national government via BDUK, every opportunity has been used to maximise other funding sources including EU funds, and the suppliers using their own funds to reach premises.

At the conclusion of much of this work in 2018, Fastershire was recognised by the communications industry including being awarded the Connected Britain Superfast Award. Then, in 2019, Fastershire was recognised as having made the best Public Sector Impact by the Independent Networks Cooperative Association.

**3.2 Delivery Stages**

The 2015-18 iteration of the Fastershire Broadband Strategy was adopted in 2015 with a revision approved in 2017. The strategy consisted of four stages which are listed below alongside the activity that took place during the strategy period, and the results to date as well as those anticipated for future years.

| Stage | Description | 2015-18 Activity | Results |
|---|---|---|---|
| 1 | Commercial Deployment | Fastershire undertook a number of Open Market Reviews and formal Industry Consultations to assess the degree of coverage that could be attributed to private endeavours during the strategy period.<br>Fastershire also led on a Soft Market Engagement study for the Joint Core Strategy (JCS) for Gloucestershire. | Visibility of c. 225,000 premises that had / would benefit from superfast broadband as a result of commercial endeavours.<br>A clear evidence base for the medium term viability of the JCS area of Gloucestershire for the commercial deployment of full-fibre illustrating a significant change in the appetite for investment in the urban areas. |
| 2 | Fastershire-wide contract using gap funding from the local authorities and BDUK | Major procurement exercise in 2012 resulting in a £35m contract to subsidise BT to deliver superfast broadband across 14 unique milestone areas across Herefordshire and Gloucestershire. | Contract complete in May 2018, with over-delivery in volume of premises:<br>77,000 superfast premises in Gloucestershire and 35,000 in Herefordshire<br>Retention payment due to under delivery in some milestones available for re-investment and claw back available for re-investment. |
| 3 | Regional contracts using gap funding from local | Multiple major procurement exercises resulting in 5 contracts with Gigaclear valued at £21.5m and 2 contracts with Openreach valued at £900k. Delivery began 2015. | Gigaclear contract:<br>Lot 1 central Cotswolds complete in 2018.<br>Total premise full-fibre “ready for service” (RFS) to date Herefordshire total 2,400 (1,700 with no previous superfast capability or ‘White’), Gloucestershire total 21,000 (13,000 with no previous |

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| | authorities and BDUK | | superfast capability). 1.7m Meters of Fibre laid.<br>BT contract:<br>Total RFS to date Hereford 1,765 Cheltenham and Gloucester 2,836<br>Collective position 45,400 RFS premises upon the conclusion of the stage 3 contracts. |
| 4 | Contract changes using gap funding from local authorities | Negotiating additional 10% funding to increase the coverage of Stage 3 and Stage 4 contracts. | Gigaclear contract changes c. £2m value to reach c.1,600 additional white premises.<br>Negotiation with Airband to bring in extra premises into scope all of which are white premises. |
| | Small Cluster Contracts EU funded | 41 potential clusters identified for DEFRA funding of £7m.<br>Major procurement exercise resulting in Airband contracted to deliver 11 areas and Voneus 5 more. First project in the UK to be awarded funding. | Airband contracted to deliver hybrid FTTP to c. 3,000 premises. 1 area complete to date.<br>Voneus later withdrawing from contract committing to deploy commercially and freeing up c. £1m for reinvestment. |
| | Grants EU and local authority funded | £640k ERDF funding secured to provide grants to businesses in Herefordshire and Gloucestershire not due to benefit from the existing contracted delivery.<br>Portal developed MGBG launched with >50 suppliers actively bidding. | £993k value committed to projects, c.80 businesses benefitting, c.£5.5m anticipated GVA uplift[vi], c.340 additional FTTP premises c.940 additional superfast premises. The MGBG has also encouraged new market entrants e.g. Full Fibre Ltd and Glide to expand coverage in Herefordshire and Gloucestershire. |

### 3.3 Subsidy, Technology and Supplier Delivery to date

Figure 1 below illustrates the expected position across Herefordshire and Gloucestershire upon the successful conclusion of all of the contracted activities and the proportion of premises that achieved superfast speeds for the first time as a result of each of the 4 stages of the Fastershire Broadband Strategy 2015-18.

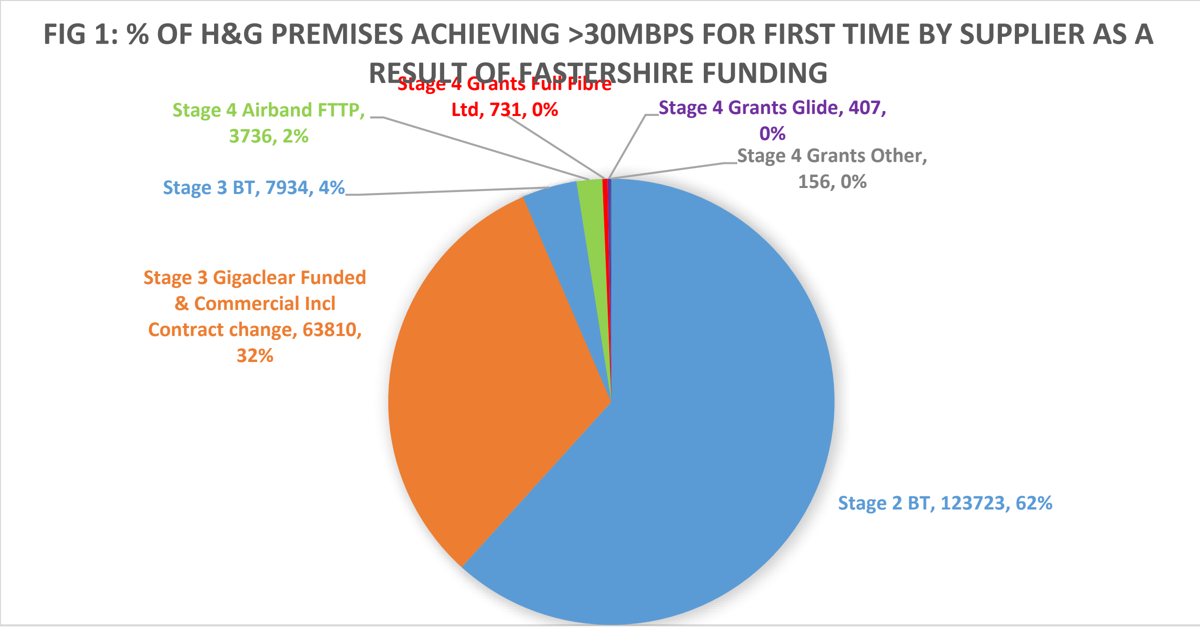
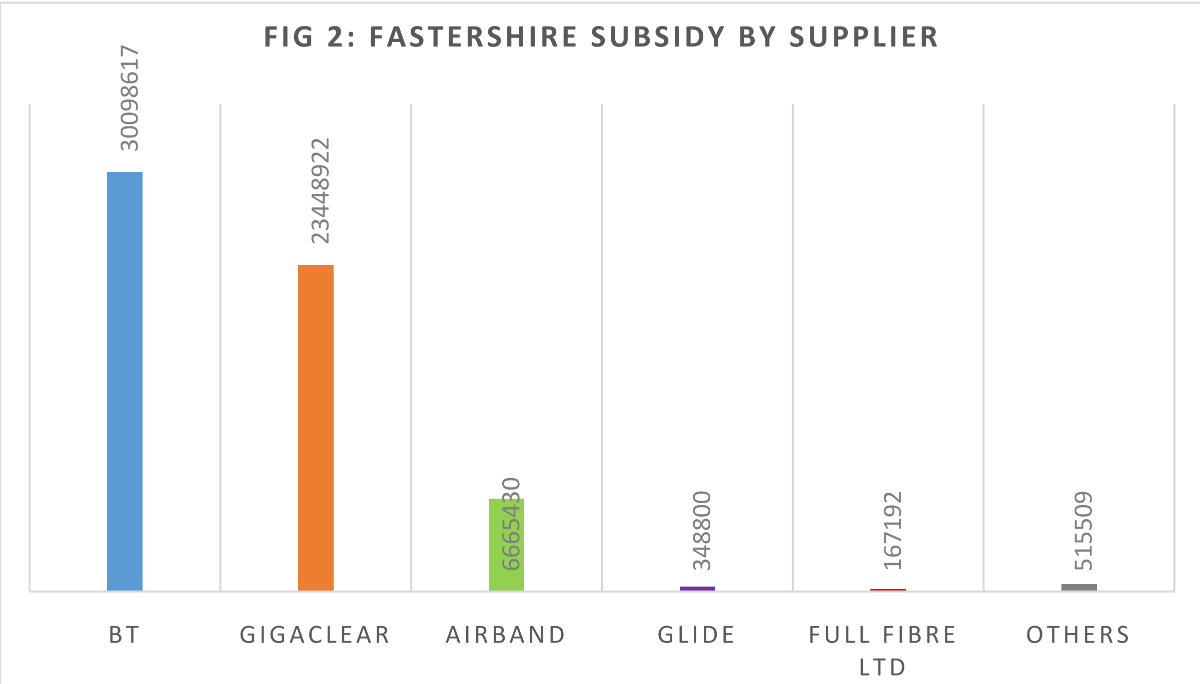
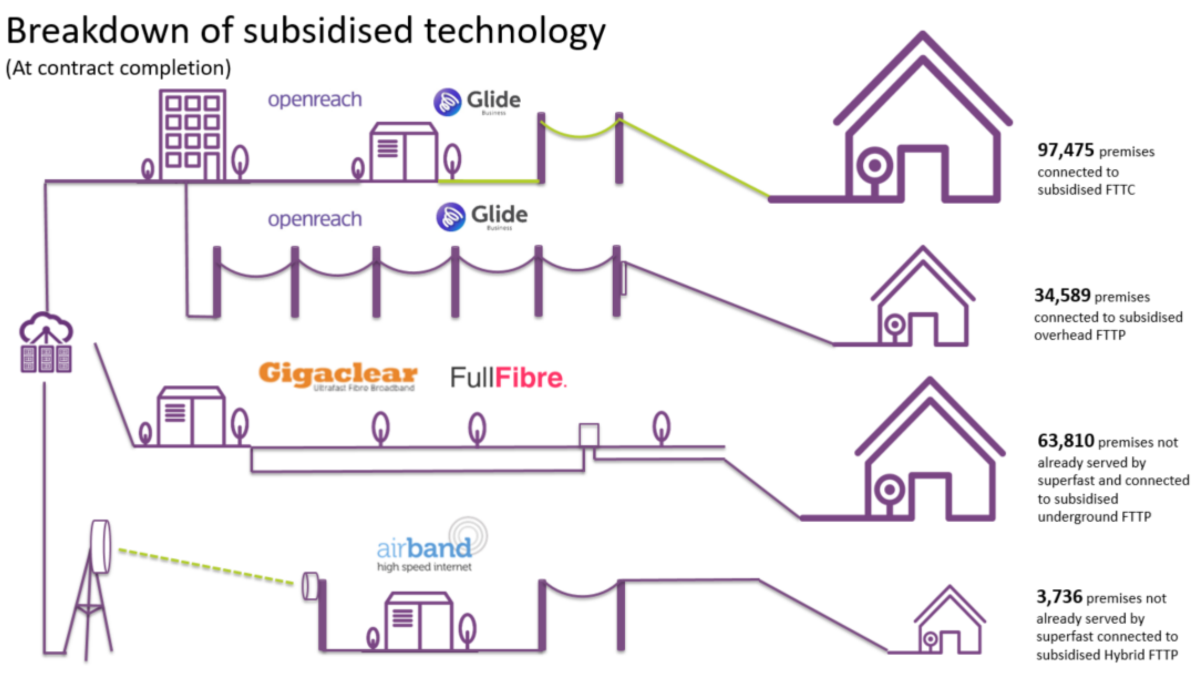



Figure 2 below breaks down the level of subsidy committed by supplier across all of the 4 stages of the Fastershire Broadband Strategy 2015-18



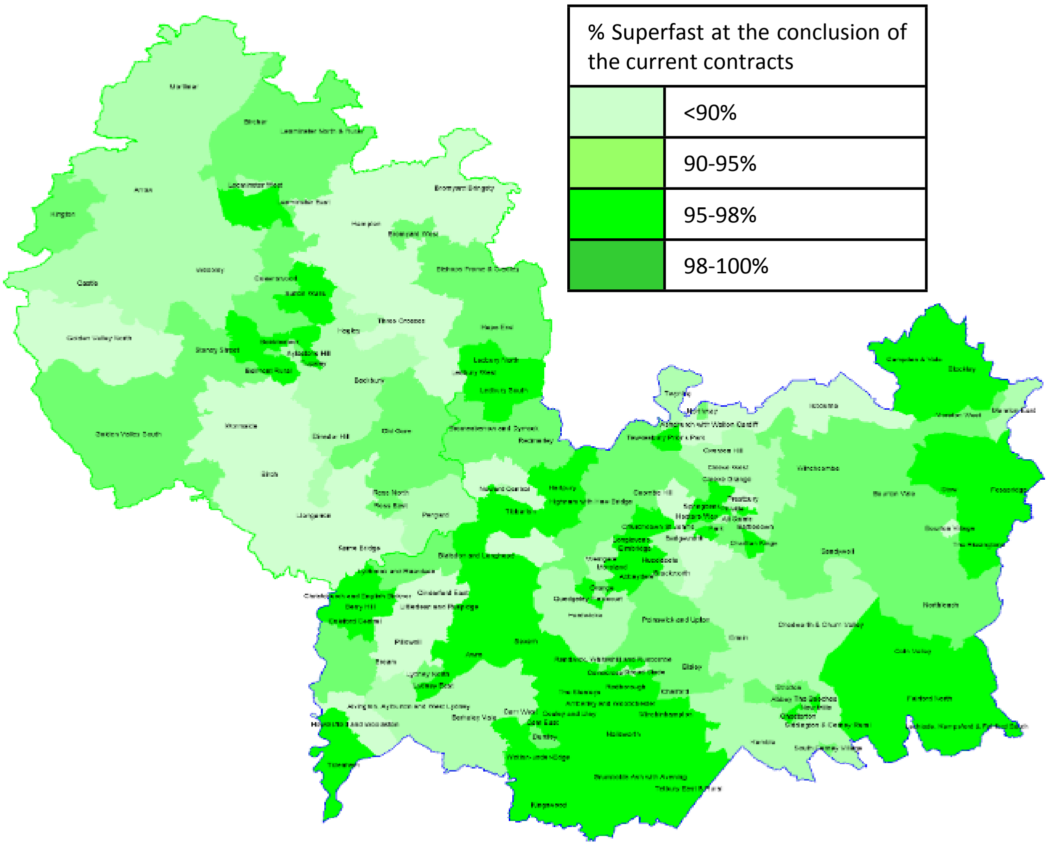
The diagram below breaks down the volume of premises enabled using Fastershire Subsidy by technology type.



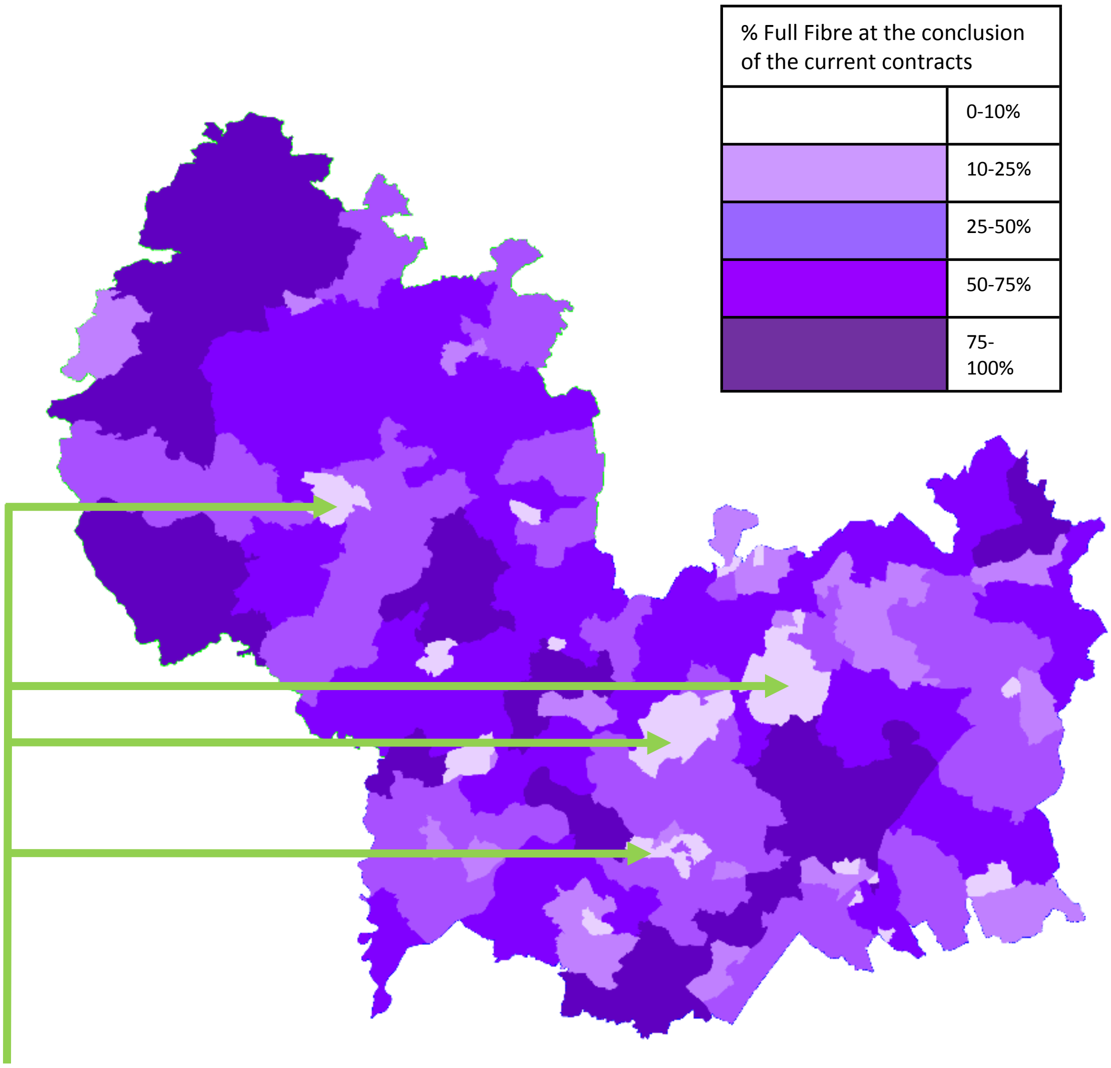
## 4. Residual Position

Upon the conclusion of the existing Fastershire contracts, 4% of Herefordshire and 3% of Gloucestershire premises will remain without the ability to connect to Superfast broadband if no further action is taken.

The map below shows the level of percentage coverage in each ward. There will remain wards that have less than 90% superfast speeds of >30Mbps.




By investing in full fibre technologies to achieve superfast capability, Fastershire has ensured that the rural areas of Herefordshire and Gloucestershire will be significantly ahead of the urban areas as well as the UK more widely. The map below shows the percentage coverage of full fibre at the conclusion of current Fastershire contracts. This does not account for any yet to be declared commercial provision which it is believed will be significant during the strategy period.




These locations are highly likely to prove commercially viable for the deployment of Full Fibre and it is a matter of time before formal announcements are made.

## 5. Strategic Context

A lot has happened in digital connectivity arena since the last iteration of the Fastershire Broadband Strategy was published. The government, having achieved the national target of 95% superfast coverage, have switched their aspirations towards full fibre whilst the buoyant investment market for infrastructure with long-term returns has led to a significant increase in the private sector appetite to deploy full fibre commercially. That said, the familiar pattern of multiple investors concentrating their resources in the larger towns and cities appears to be the standard practice to date.

Estimates vary over how much of the UK will ultimately prove to be commercially viable for full fibre deployment but lie somewhere between 80% and 90% of UK premises. What is far harder to assess at a local level is how much of those proportions will land in rural areas and in which exact locations market failure will persist. This is particularly difficult in Herefordshire and Gloucestershire given Fastershire's success in bringing full fibre to some of the least viable rural areas of each county. This will serve to increase the likelihood of commercial expansion in many of the geo-types that the national modelling suggest should (in normal circumstances) be unviable for full fibre.

**5.1 Future Telecoms Infrastructure Review 2018**

Notwithstanding more recent pronouncements, the Future Telecoms Infrastructure Review (FTIR) formalised a change in government policy moving the target away from Superfast towards a new objective of delivering Full Fibre to 50% of premises by 2025 and 100% by 2033 as well as accelerating the deployment of 5G.

**5.2 Building Digital UK 'Outside In' Approach**

BDUK is the arm of the Department for Culture Media and Sport responsible for delivering the targets identified in the FTIR. They are currently engaged in devising how to implement the policy including how the target dates might be accelerated.

The National Broadband Scheme 2016 has come to the end of its life and there can be no further supply side procurements until BDUK negotiate a new state aid regime which is unlikely to be in place until well into 2021.

In the longer term and once the new state aid regime is in place, BDUK will seek to deploy their 'Outside In' approach, which as the title suggests will use c. £5bn of government subsidy to work back from the most inaccessible areas. Whilst this approach is still under development, it is likely that future procurements and contracting will be undertaken centrally rather than by local authorities. It may also be the case that areas that have not continued to deliver contracts will be targeted initially in order to avoid disrupting active deployments like that in Fastershire. It is likely that it will be 2023 until their Outside In plan is delivering in earnest.

In the interim, BDUK are using their Rural Gigabit Connectivity programme to pilot the Outside In approach. In order to do this they have re-conceived the Local Full Fibre Network (LFFN) to provide service to rural hubs such as schools and doctors surgeries from which BDUK vouchers valued at £3,400 can be used to expand coverage via the contracted service provider. Fastershire have modelled what this approach might be able to achieve in Herefordshire and Gloucestershire to resolve the residual superfast gap. In essence, while only a limited number of locations with such facilities can be typified as hard to reach, anywhere that has a school or surgery either already has or is likely to get near universal superfast and in many cases full fibre coverage via one of Fastershire's contracts. There are therefore limited opportunities to benefit locally from this approach.

As we have seen through Stage 4 of the existing Fastershire Broadband Strategy, the provision of grants can support some excellent bespoke solutions and resolve fragmented geographical not-spots. However, the funding offered as part of the RGC voucher at £3.4k per premise will not be enough in isolation to resolve such issues. While it is true that when amalgamated the vouchers can provide large pots of funding, aggregation at scale will only be possible in areas that will lend themselves to the commercial roll out. Vouchers in particular are also an issue as they are driven by suppliers and not opened up to competition which risks communities being coerced into agreeing sub optimal solutions.

## 6. Funding and break down by county

The Table below provides a high level view of the budgets that are likely to be available to Fastershire for new (yet to be contracted) activity during the course of this strategy period. There may be a degree of variability as the exact value of clawback will be determined by the level of take up experienced in each of the contracts. This reinforces the need to continue to escalate efforts to encourage greater adoption of the networks that have received gap funding subsidy to date in order to maximise the funding available for reinvestment.

| | **Residual £** | **New Funding £** |
|---|---:|---:|
| BDUK | 506,075 | 0 |
| Herefordshire Council | 3,328,363 | 4,500,000 |
| Gloucestershire County Council | 2,224,056 | 2,700,000 |
| ERDF Herefordshire | £0 | 271,122 |
| ERDF Gloucestershire | £0 | 133,500 |
| CDC | £0 | 500,000 |
| **Total** | **6,058,495** | **8,104,622** |

This summary budget does not require any additional commitment from either local authority. The values are drawn from residual funding which is already ring-fenced for the pursuit of broadband and committed as match funding against already spent BDUK funding, anticipated claw back and new EU funded grant extensions.

Whilst c. £14m is a substantial amount of funding, it is worth noting that, given the 10,700 premises that will remain unserved at the conclusion of the existing contracts, it equates to a little over £1k per property and therefore is unlikely to be enough to be enough to resolve the residual coverage gap in its entirety.

Fastershire will also seek to take advantage of any new external funding opportunities as and when they arise.

## 7. Activity 2019-22

The next 3 years present both exciting opportunities and significant constraints for the advancement of digital connectivity across Herefordshire and Gloucestershire. Whilst it is highly likely that the private sector will announce significant full fibre expansion plans (predominantly in the urban areas of both counties but possibly even further) during this period, with the absence of a state aid framework in the form of an active national broadband scheme, the public sector is unable to engage in large scale procurements to tackle those areas which are unlikely to benefit from this new wave of commercial investment.

Given this context, it would be easy to sit back and wait to see where the market fails to deliver full fibre and for central government to formalise its policy and delivery instruments. However, Fastershire retains funding which the local authorities are obligated to invest in broadband infrastructure in order to match the BDUK funding that has already been spent and will soon be receiving clawback funding which needs to be utilised for reinvestment in digital infrastructure if it is to be retained locally. Furthermore, despite the renewed market interest in full fibre investment, there remain a significant number of premises c.10,700 that, as it stands, will not be able to access superfast broadband after 2021 and who are unlikely to be a focus for that renewed investment. It is therefore desirable to continue to invest and to focus even more intensively on the areas that will remain unserved beyond the completion of the existing Fastershire contracts.

With these areas in mind, there appears to be little value in relying on the existing range of BDUK programmes. The RGC (Rural Gigabit Connectivity scheme) offers limited potential to tackle the remaining areas and when the 'Outside In' programme begins to roll out in earnest, Herefordshire and Gloucestershire are unlikely to be prioritised due to the local council continuing with ongoing delivery.

Given the state aid position, activity during 2019-2022 will see a shift in Fastershire's focus from working intensively with suppliers to find solutions for communities to supporting communities to find the best placed supplier to provide them with improved connectivity. That support will come in the form of bespoke grant funding, advocacy and a structural framework through which to procure the optimal solution for their localities.

## 8. Activity Action Plan

| Stage | Description | 2019-22 activity |
|---|---|---|
| 1 | Commercial delivery (superfast and full-fibre).<br><br>The commercial deployment of superfast broadband had peaked by 2014 with the public sector increasingly responsible for subsidising the areas that the market had failed to enable.<br><br>More recently, as the supplier market has grown there is a renewed interest in commercial development driven by competition in the investment market for long term infrastructure ventures. | Actively monitor the market's intention to provide both superfast and full-fibre connectivity. Maintain relations with Openreach, Virgin Media, City Fibre (and their partners Vodafone), Gigaclear, HyperOptic, Fibre Nation, Airband, Zzoomm, Glide, Full Fibre Ltd and others.<br><br>Encourage and work with commercial providers to use their own investment to extend access to full fibre broadband, in particular by promoting the availability of backhaul options delivered through Fastershire funding to date.<br><br>Encourage the local planning authorities to adopt the best practice approaches in relation to new sites and the advanced provisioning of full fibre access.<br><br>Advocate communication providers' needs with local highway's departments and help resolve any issues that arise.<br><br>Communicate the local opportunities for full fibre provision to commercial providers. |
| 2 | BT (Openreach) Fastershire wide contract. Delivery completed in 2016. | Monitor claw back and reinvest funding in later stages of the Fastershire Broadband Strategy. |
| 3 | Regional Contracts with BT (Openreach) and Gigaclear incorporating contract change to include additional premises. | Complete the out-standing change requests and manage the Gigaclear FTTP Rural contracts to their successful conclusion.<br><br>Conclude the BT Urban Contracts and explore opportunities to use the contracts as vehicles to stimulate Full Fibre investment. |
| 4 | Small Cluster contracts deployment. | Complete the out-standing change requests and manage the Airband Hybrid FTTP contracts to their successful conclusion. |

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| 5 | Business Support Grants – second phase of Marches and Gloucestershire Business Broadband Grant.<br><br>Fastershire Community Broadband Grant – new direct grant to localities to purchase broadband solutions (see below in detail). | Secure ERDF funding to extend the MGBG and continue to award business grants.<br><br>Continue to make small residential grants available to premises that have been miss-reported at Open Market Review.<br><br>Establish a wider Fastershire Grant for premises outside of any plan to procure Gbps capable services.<br><br>Establish a local Dynamic Purchasing System to enable groups of premises that have <30Mbps capability and sit outside of any existing plan to aggregate Fastershire Grants to procure Gbps capable services targeting residual rural geographies. |

## 9. Stage 5 Fastershire Community Broadband Grant

The new Stage 5 will offer grants on a property basis to individuals and businesses to procure their own Gbps capable broadband solutions from a selected range of suppliers.

Grants will be provided as follows:

- Individual grants will be offered to eligible business premises up to £25,000 via the Marches and Gloucestershire business Broadband Grant (MGBG) with solutions procured via the dedicated portal www.mgbroadbandgrants.com.
- Fastershire Community Broadband Grant grants (for residential and commercial buildings that are not eligible for ERDF funding) will be offered with solutions procured via the Fastershire Dynamic Purchasing System. The value of grants to individuals will be subject to a value for money test based on the pro rata cost of the Most Economically Advantageous Tender (solution) from a competitive field. Consideration will be given to the actual cost, number of superfast white premises to be connected, geo-type and the number of incidental premises uplifted to Full Fibre. The Cost Per Passed Premises (CPPP) of Fastershire's existing full fibre contracts as well as relevant grant awards made to date under the MGBG will also be used as benchmarks.

A Dynamic Purchasing System (DPS) will be established that:

- Provides the mechanism for communities to collectively seek costed equitable solutions from a range of suppliers in order to underpin their Fastershire Community Broadband Grant applications.
- Is notified on the OJEU procurement as an open-ended opportunity with new suppliers actively encouraged and able to apply to join the scheme at any time.
- Assesses suppliers' financial standing and capability to provide Wholesale NGA Access using the same qualifying criteria as Fastershire's previous OJEU state aid compliant tenders which were also based on the EC Regulations for public investments into broadband.
- Ensures suppliers' requesting access to the DPS agree to work at risk until the completion of any given project.

- Gives qualified suppliers equal opportunity to design and cost projects for applicant communities.

This will create a more agile and responsive mechanism to use Fastershire's residual funding and to ensure the market failure to provide superfast broadband gets resolved. The approach works within the state aid regulations regardless of the lack of national broadband scheme and will enable Fastershire to focus investment where it remains needed, it does not rely on the proximity of a public sector hub and can be tailored to the needs of different localities.

## 10. 5G Mobile Coverage

5G is increasingly being associated with full-fibre broadband in the public discourse around future connectivity but they are very different technologies. 5G is not part of the Fastershire programme. However, it is recognised that extensive fibre network will support emerging technologies including increased mobile coverage.

5G is the fifth generation of mobile networks following previous mobile generations 2G, 3G and 4G. Compared to most of the current networks (which primarily use 4G and 3G technology), 5G is set to be far faster and more reliable, with greater capacity and lower response times. Unlike previous generations of mobile network, 5G is unlikely to be defined by any single form of technology. It is often referred to as "the network of networks" for the way it will bind together multiple existing and future standards, including current advanced LTE (4G) networks.

Beyond a simple performance increase, 5G is set to open up a whole new set of use cases such as: superfast 5G broadband with no need for landlines, remote/ distance health care for patients, car to car and car to infrastructure communication, driverless cars, holographic technology, the arrival of 5G phones and devices such as 5G TVs.

To be clear, the role of councils in the deployment of 5G will be limited. The mobile providers will make their own decisions over deployment timescales and locations and often no planning permission will be required due the existing national legislation of permitted development.

The councils are also aware of public concerns over potential health impacts of 5G, and will work with organisations such as Public Health England to understand and disseminate relevant information.

## 11. Digital Adoption and Exploitation

As has been a feature of the Fastershire project to date, efforts will continue to support residents, businesses and communities to both adopt and exploit high speed broadband.

Whilst increased adoption will boost the clawback available for reinvestment, in itself it will not release the economic and societal potential offered by improved connectivity. To this end, only the exploitation of digital connectivity will benefit the local economy by enabling improved productivity and profitability, helping residents and communities to become more sustainable and allowing public services to benefit from greater digital consumption.

Fastershire will continue to communicate its progress and make communities aware of the ability to order higher grade services.

The Faster Business programme of events and one to one advice sessions for local business to embrace digital technology will also carry on having supported over 500 local businesses to date. So too will the Faster Farmers programme run in partnership with the Herefordshire Rural Hub and Faster

Communities which offers an array of community based training including both open community sessions and more bespoke work with specific community groups.

As well as continuing to run its established programmes, Fastershire will seek to run other projects and programmes when funding is available to focus attention on digital exploitation. As an example of this being the recent partnership with the Digital Catapult to demonstrate the potential of digitally connected sensors to assist in the care of the county's elderly and vulnerable residents.

## 12. Summary

Fastershire's delivery across Herefordshire and Gloucestershire has markedly increased the level of access to both superfast and full fibre broadband and had a transformative effect for residents, businesses and public services. The Fastershire programme is complex and time consuming and has, as with all major capital infrastructure projects due their nature, not always gone according to plan.

The work is not complete in either county. There is a collective view to continue to focus on "finishing" the job that was started to reach as close to every premise with high speed broadband as possible making a real difference to people's lives and the viability of businesses.

This future strategy, covering the next three years will focus on solving the residual gap in superfast broadband access through a local grant scheme – enabling communities and residents to achieve their ambitions for fast broadband connections. Whilst to a large degree the strategy sets out how the gaps in rural coverage will be filled, the cities and market towns also benefit from the fibre backhaul and the competitive environment created by Fastershire. It is anticipated that through commercial investment and some engagement from Fastershire, full-fibre connectivity will also spread into those areas.

The physical network is one element of developing access. The councils, through the Fastershire projects, also have a role to reduce the soft barriers to digital connectivity. They will continue to do this by providing training and awareness activities to ensure that people are not digitally excluded and to help them to make the most of the significant investment made by local and central government into superfast and full fibre broadband.

## 13. Glossary

| Acronym / Term | Full Title | Description |
|---|---|---|
| BDUK | Building Digital (Broadband Delivery) UK | An arm of the Department for Culture Media and Sport tasked with funding Local Authorities to improve broadband coverage |
| EAFRD | European Agricultural Fund for Rural Development | European Funding targeted at measures to improve economic productivity in rural areas |
| Clawback | | Funding that has been invested by the public sector in gap funding contracts that is returned by suppliers once the viability of the delivery is proven to be greater than had been anticipated |
| CPPP | Cost Per Passed Premise | Can mean either the total cost of deployment or the element of the total cost that requires public subsidy divided by the number of premises that will be reached by the infrastructure |
| ERDF | European Regional Development Fund | European Funding targeted at measures to improve economic productivity |

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| FTTC | Fibre to the Cabinet | Where fibre is deployed between the exchange and a green cabinet with the final connection relying on the existing copper connection |
| FTTP | Fibre to the Premise | Where fibre is deployed to a node within close proximity to a premise and which is connected to a premise with fibre once a service is ordered |
| FTIR | Future Telecoms Infrastructure Review | Government Policy vis a vis the expansion of digital connectivity. |
| Full Fibre | | Gbps+ capable<br>Requires building over previously funded FTTC to achieve 100%<br>Unclear where the market failure exists |
| Gbps | Gigabit Per Second | Measure of Broadband Speed. Often used as an interchangeable term with Full Fibre as Full Fibre is capable of transferring synchronous Gigabit speeds. However, it is not the only technology capable of this and therefore the link should be treated with caution |
| GBVS | Gigabit Voucher Scheme | Voucher worth £2,500 offered by BDUK to upgrade to Gbps capability |
| Grey premise | | A property that can access speeds >30Mbps from one or more suppliers. |
| JCS | Joint Core Strategy area | Area covering Gloucester, Cheltenham and parts of Tewkesbury district |
| LEP | Local Enterprise Partnership | Body which coordinates economic development activity |
| LFFN | Local Full Fibre Network | BDUK scheme focused on urban areas to encourage Full Fibre delivery |
| Mbps | Megabits Per Second | Measure of Broadband Speed usually used to express download capability |
| MGBG | Marches and Gloucestershire Business Broadband Grant | Grant scheme using ERDF funding and managed by Herefordshire Council offering grants to businesses in the LEP areas of the Marches and Gloucestershire to improve their connectivity |
| NGA | Next Generation Access | Term denoting superfast broadband with specific characteristics. |
| OMR | Open Market Review | A consultation of private operators to understand the extent of commercial plans |
| OJEU | Official Journal of European Union | Platform on which major public sector contracts must be advertised to ensure fair and open access by the market. |
| RCBF | Rural Community Broadband Fund | DEFRA funding scheme to address shortfall in coverage in rural areas |
| RFS | Ready for Service | The point at which a premise is recognised by suppliers as being able to order broadband services |
| RGC | Rural Gigabit Connectivity | BDUK initiative focusing on schools as a pilot for a later 'outside in approach' |
| Superfast | | Broadband connection with the capability of achieving >30mbps Download / >5Mbps Upload |
| USC | Universal Service Commitment | Central Government's commitment that everyone should be able to access a 2Mbps Service |
| USO | Universal Service Obligation | Obligation placed on Openreach by Central Government to provide a >10Mbps service to every premise from 2020. |

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|---|---|---|
| White premise | | Property that following an OMR is proven to be without access to superfast broadband and / or is not planned to be upgraded to superfast broadband in the forthcoming 3 years. |

[i] UPRNs relating to Council Tax and NNDR eligible properties located within the boundaries of Herefordshire and Gloucestershire as identified by the ordinance survey addressbase product Epoch 65 2019

[ii] Existing or anticipated fixed Line Capability of >30Mbps download and >5Mbps upload via one or more infrastructure providers as evidenced via contractual reports and / or suppliers' professed intentions

[iii] UPRNs relating to Council Tax and NNDR eligible properties located within the boundaries of Herefordshire and Gloucestershire as identified by the ordinance survey addressbase product Epoch 65 2019

[iv] Existing or anticipated fixed Line Capability of >1Gbps synchronous via one or more infrastructure providers as evidenced via contractual reports and / or suppliers' professed intentions

[v] premises in LSOAs with a 'rural' geo-type Rural and Urban Area Classification 2011 – Namely those defined as Rural town and fringe; Rural town and fringe in a sparse setting; Rural village and dispersed; Rural village and dispersed in a sparse setting

[vi] Source: MGBG Summative Assessment