Curia

Connecting the Isle of Wight

Demonstrating the Value of Improved Connectivity

WightFibre
because we care

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Foreword

WightFibre is a local Isle of Wight company that has provided phone, broadband, and TV service to the Isle of Wight since 2001. WightFibre's company purpose is to help make the Isle of Wight a better and more sustainable place to live, work, and play for all – with a vision "to make the Isle of Wight one of the best-connected places on the planet".

Funded by Infracapital Partners, with support from the Government's Digital Infrastructure Investment Fund and Building Digital UK voucher funding, WightFibre has already spent over £80M (Dec 2023) deploying full-fibre broadband technology to 77 per cent of the island (Dec 2023). This will be available to 86 per cent of the island by the end of 2024 and 99 per cent by 2027.

This infrastructure investment is a good thing for the island. It is on a par, for example, with investment in railways in the 1800s, and is the single largest private sector investment the island has seen in generations. It is setting the island apart from other similar rural areas in the UK and is allowing the island to lead the way in the deployment of new technologies and ways of working that depend on reliable and fast broadband connections.

But what technologies and where?

WightFibre has commissioned Curia to help us quantify the social, environmental, and economic value of full-fibre infrastructure. The data is benchmarked against nationally recognised data and is informed by a thorough review of all pre-existing evidence. This research offers an opportunity to identify effective solutions to digital exclusion and how to incentivise further investment from a range of sectors in the Isle of Wight economy.

We hope quantifying the value WightFibre is delivering to the Isle of Wight provides a clear demonstration of our commitment to the island and our island community.

We are already seeing the benefits first-hand. The investment in a 1,000-seat call centre by Ascensos was made possible by WightFibre's rapid deployment of a full-fibre connection to the call centre. The adjacent Building 41 innovation centre with multi-gigabit connectivity was made possible by full-fibre technology from WightFibre. Branstone Farm – a £13.6M sustainable development of social and affordable housing alongside a business park – was also made possible by multi-gigabit connectivity from WightFibre.

I hope this report will complement the Isle of Wight Council's 2017 Digital Strategy. It is designed to inform an update to that strategy and, hopefully, assist our island community in exploiting this improved full-fibre infrastructure. This will, in turn, drive greater social inclusion and economic growth on the island, "because we care".

John Irvine
Chief Executive
WightFibre

Executive Summary

The Digital Island Vision published by the Isle of Wight Council in 2017 is "to be the world's smartest, most connected island".[i] That vision is based on core principles and objectives, shaped by local stakeholders, and driven by the environment and the economy, which characterise the unique nature of the Isle of Wight.

The island has been embarking on an ambitious transformational programme of regeneration to address some of the structural, economic, and financial challenges it is facing. Digital technologies are contributing to and impacting every single aspect of these challenges and opportunities. All of this has improved the digital infrastructure and connectivity at the heart of the island, enabling business growth, social wellbeing, and environmental change. In combination, digital connectivity and digital technologies are crucial to the island's economic and social development. This future prosperity relies on everything from economic growth to the transformation of public services, from overcoming the separation from the mainland to educating the island's young people, attracting inward investment, and retaining talented Islanders.

The world is seeing unprecedented investment in and delivery of fibre and mobile broadband infrastructure, and the UK is no exception. There is a recognition that high bandwidth and secure connectivity are the means to enable new digital transformation to improve economies and productivity, achieve Net Zero ambitions and facilitate the transition to a modern society. The five main 'mega-trends' that are fuelling this investment are remote working, connected devices, the adoption of cloud technology, the digital and green transformation of public and private sectors, and artificial intelligence. Therefore, the need for reliable, high-bandwidth, secure, interoperable data transmission is creating the investment, supply, and demand to prioritise the delivery of new infrastructure in a 'perfect storm'. In addition to these trends, there is an immediate need to address efficiencies and inequalities in public services, such as education and healthcare, to meet the needs of an increasingly digitally aware society. For example, during the COVID-19 pandemic, 46 per cent of people were unable to access critical services online due to an unreliable Internet connection (Cisco Broadband Index 2022). This included medical appointments, online education, social care, and other public and utility services.[ii]

This report explores the economic, social, and environmental benefits of current and future full-fibre broadband services across the Isle of Wight. WightFibre was one of the first broadband providers in the UK to invest substantially in full-fibre infrastructure as part of the Gigabit Island launch in 2017. As a result, these benefits are already being realised and will accelerate significantly as take-up by businesses and consumers enables digital transformation.

However, the predominant technology deployed prior to 2018 continues to use old (copper) infrastructure, which will always limit the potential speeds, resilience, and benefits for existing and future generations.

These old copper-based technologies are being replaced by full-fibre technology, where the fibre-optic cable is deployed all the way into the home, providing gigabit speeds and improved reliability.

The case for full-fibre broadband is essential and has been accelerated by the consequences of the COVID-19 pandemic, with home working, video communications, remote services, online banking, and direct retail operations creating significant, unprecedented demand. In a business environment, especially for small to medium-sized organisations, the availability of high-bandwidth, resilient, and affordable communications services is essential and helps underpin turnover growth, productivity, new jobs, and investment. In recent years, other studies have highlighted the social and environmental benefits of improved infrastructure, including digital inclusion, education and skills, health and wellbeing, and de-carbonisation towards achieving Net Zero targets.

There is also significant new potential for inward investment, remote working, business start-ups, scale-ups, and higher-value jobs for the island. Post-pandemic, the changes in remote working and the rethinking of office spaces and locations have presented a significant new opportunity for GVA growth, diversification, and productivity. There are also benefits in terms of developing the digital economy with IT and software companies, and businesses that rely on fast, reliable infrastructure to grow and enable their staff to benefit from flexible working. Mobile networks, including 5G and beyond, require full-fibre broadband – especially in rural or semi-rural areas – to maximise their coverage and ensure mobile broadband traffic can cope with increased customers and usage. Maximum coverage of 5G (with future 6G capability) mobile data and voice services are essential for a modern, sustainable, and productive economy and improved public services.

In November 2017, WightFibre announced its Gigabit Island Project. With investment from Infracapital Partners and the Government's Digital Infrastructure Investment Fund (DIIF), the project aims to deploy full-fibre broadband technology to around 74,000 (86%) premises across the island by 2024. In February 2020, BT Openreach announced they would be deploying similar full-fibre broadband in Cowes, and in July 2022, BT Openreach announced further plans to deploy to a total of 45,000 by 2026. To date, 19 per cent of Isle of Wight premises can access Openreach full-fibre broadband.

This private investment is being supplemented by voucher funding from the Government's project Gigabit. Project Gigabit is a £5 billion intervention programme for the UK from the Department for Science, Innovation and Technology (DSIT). It aims to stimulate the broadband market and local authorities to deliver new gigabit infrastructure to areas where it would not normally have been possible, and to cover 85 per cent of premises nationally by the end of 2025 and have 'nationwide' coverage (c.99 per cent), by around 2030.

The current DSIT/Building Digital UK (BDUK) plan is to allocate £10 million in funding as part of the Gigabit Broadband Voucher Scheme for the Isle of Wight. This funding is intended to extend coverage to 24,000 eligible premises in hard-to-reach places.

Primarily due to the local investment from WightFibre's Gigabit Island project, full-fibre coverage on the Isle of Wight is currently 77 per cent of premises, compared to a national UK full-fibre coverage of 60 per cent. [iii] The WightFibre 'Gigabit Island' project ultimately aims to connect all 85,000 (99%) premises.

Other regions in the UK, and internationally, have forged ahead with full-fibre broadband coverage, notably Northern Ireland (94 per cent) and Greater Manchester (89 per cent) – the role of government intervention and local service providers cannot be underestimated in this. Where alternative network providers are building, quicker and better coverage is apparent and along with it, the associated benefits. The presence of a local service provider, with investment and community plans for delivery and creating demand, will create added impetus and benefits, for example, Fibrus in Northern Ireland and WightFibre on the Isle of Wight. This creates genuine competition, local focus, and pricing (including social tariffs), and a practical difference on the ground – where community engagement, events, and support can make a significant difference to service take-up and inclusion. [iv]

This report assesses the potential benefits of gigabit-capable broadband on the Isle of Wight, including on the economy, social value, wellbeing, and the environmental Net Zero savings. The assumptions are that it will be universally available (99 per cent) by 2027, which is three years ahead of the UK Government's national ambition. At the current coverage level of 77 per cent, the Isle of Wight has already established full-fibre broadband to enhance its unique quality of life, encourage and retain businesses and employment and create a competitive advantage as a place to live and work. As this coverage is extended to all areas and the take-up of service accelerates, the impact on overall benefits will be a major opportunity for the Isle of Wight.

Gigabit-capable Broadband Coverage on the Isle of Wight

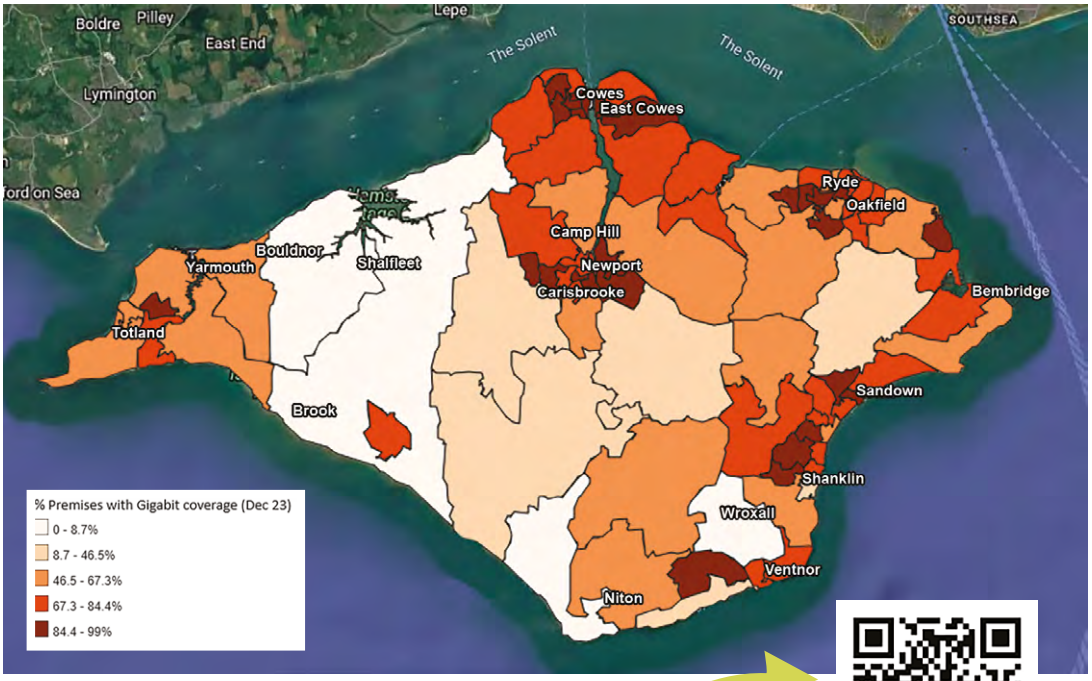
What is the current picture on the Isle of Wight for gigabit-capable broadband?

There are approximately 86,000 premises on the Island [v], including homes, businesses, and public sector buildings, with the following percentage coverage as of December 2023:

Broadband Coverage	Superfast 24mbps+	Full-fibre 100mbps+
Isle of Wight	97%	77%
United Kingdom	98%	60%

Source: WightFibre and ThinkBroadband [vi]

The most up to date map showing the extent of this coverage by postcode area is pictured below. Since 2018 rapid progress has been made by WightFibre to cover 77 per cent of Island premises with full-fibre broadband whilst Openreach has covered just over 19 per cent of Island premises. The WightFibre project has received over £110M from Infracapital Partners (including funding from HM Treasury) and NatWest Bank. Central Government via BDUK has provided £10m of intervention funding to help expedite the availability of these services. This map highlights the WightFibre coverage in an illustration of availability by postcode area, highlighting what percentage of premises in that postcode area can order a gigabit broadband service.



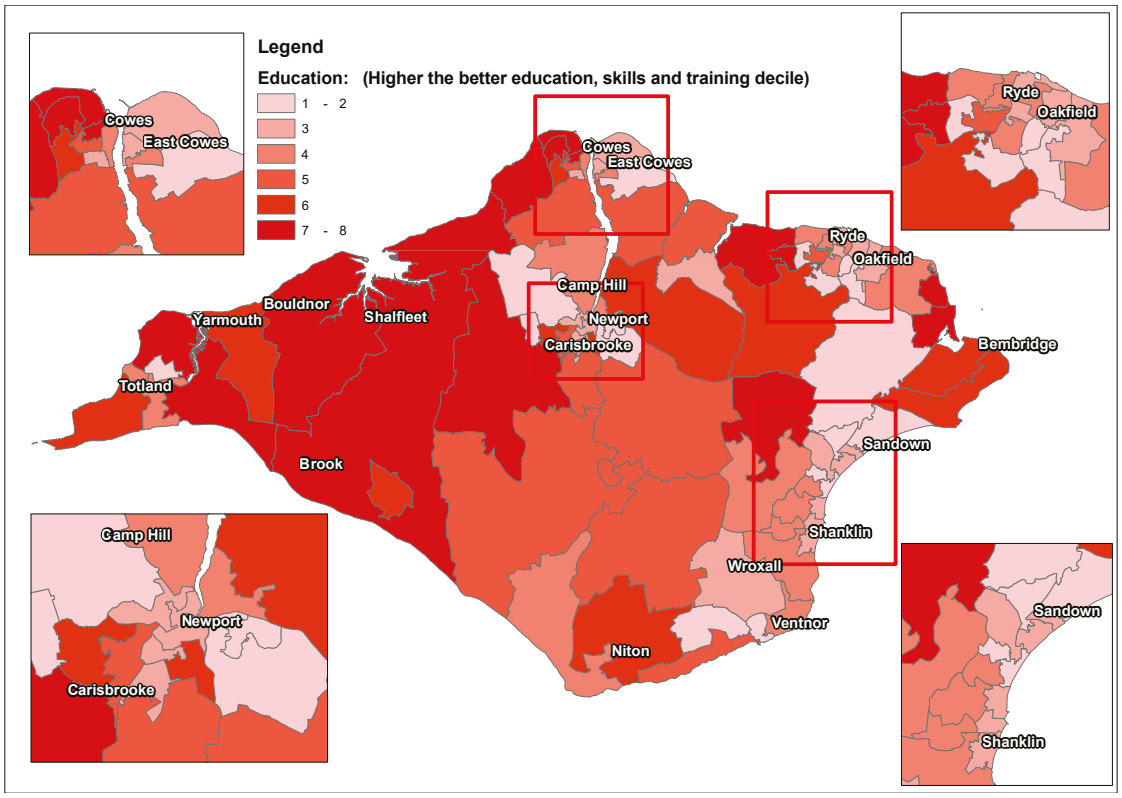
View an interactive map here

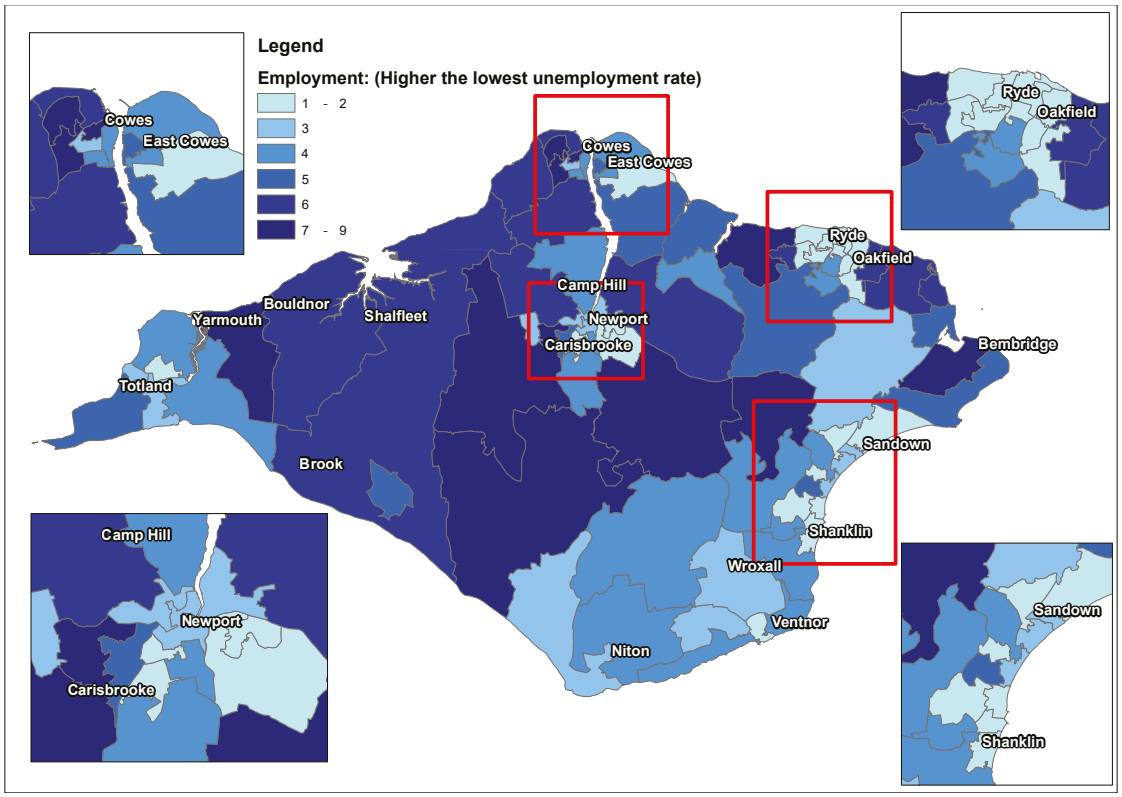
In terms of future plans, Wightfibre intend to deploy to 99 per cent of premises on the Island, the vast majority (97 per cent) with full-fibre infrastructure by 2027 and the remaining challenging sites with 5G which is increasingly capable of achieving gigabit speeds. Many of the challenges include permissions for wayleaves across land and separate infrastructure or landlord owned premises.

It is vital that all public and private sector organisations and individuals work together to solve these challenges and it is hoped this report will remind everyone of the importance of full-fibre infrastructure in realising the economic, social and environmental benefits and impact to lives and businesses. By September 2027, full-fibre broadband coverage will have reached 99 per cent of premises and this will help facilitate the full impact highlighted in this report and continue the momentum to ensure the Island is amongst the best connected places in the UK.

This impact assessment report summarises the economic, social and environmental outcomes following the delivery of gigabit broadband from 2018 to 2030. As another reference point, the following maps show the current picture from 2023 of the education, employment and health indicators as provided by the Office of National Statistics (ONS).

ONS provide UK-wide high-quality statistics, data and insights and local statistics help users and policy makers in their decision making. The maps below can be cross-referenced with the WightFibre map to give further context to the importance of gigabit broadband to maximising outcomes at local geographic levels.


Legend
Education: (Higher the better education, skills and training decile)
1 - 2
3
4
5
6
7 - 8
Cowes
East Cowes
Ryde
Oakfield
Camp Hill
Newport
Carisbrooke
Bouldnor
Yarmouth
Shalfleet
Totland
Brook
Bembridge
Sandown
Shanklin
Wroxall
Ventnor
Niton


Legend
Employment: (Higher the lowest unemployment rate)
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6
7 - 9
Cowes
East Cowes
Ryde
Oakfield
Camp Hill
Newport
Carisbrooke
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Yarmouth
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Bembridge
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Shanklin
Wroxall
Ventnor
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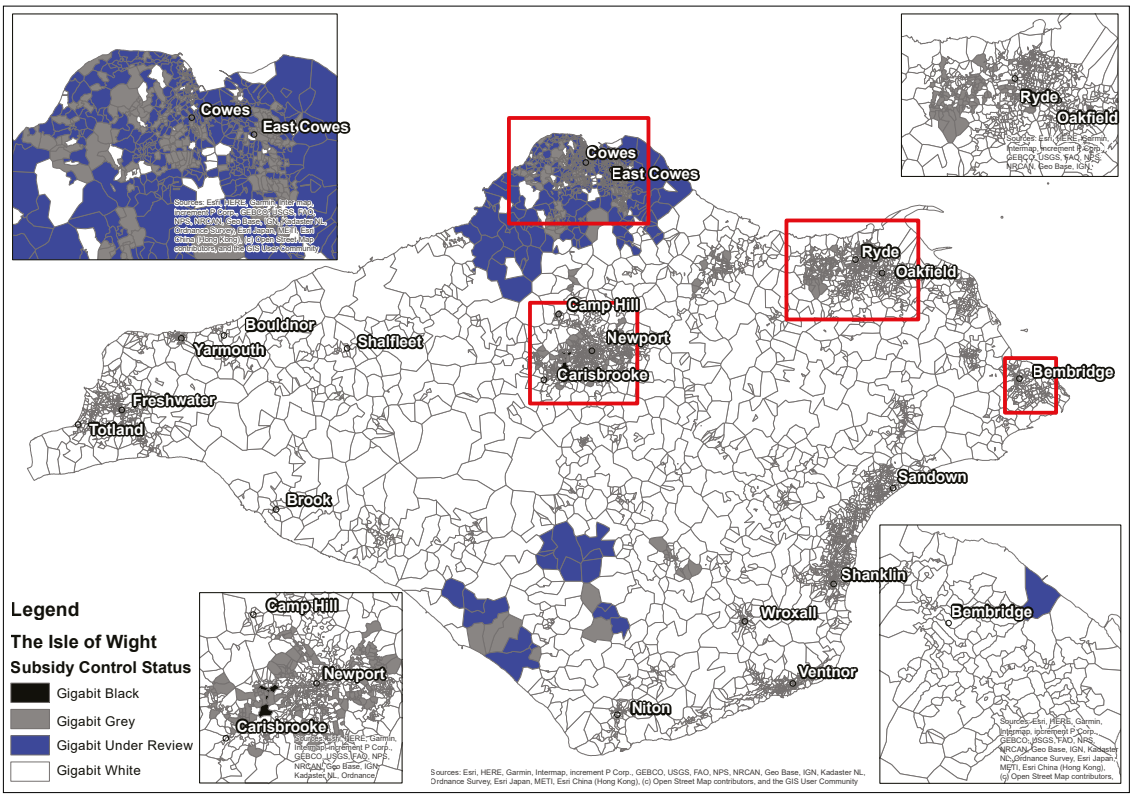
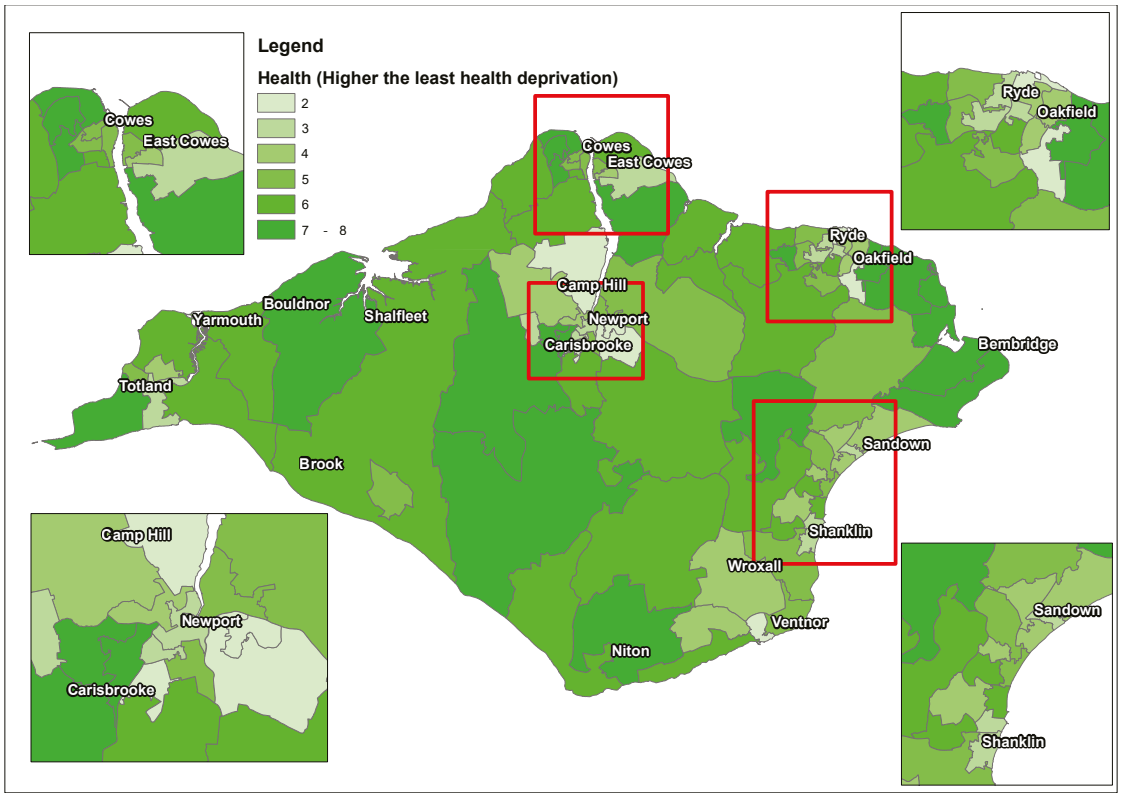
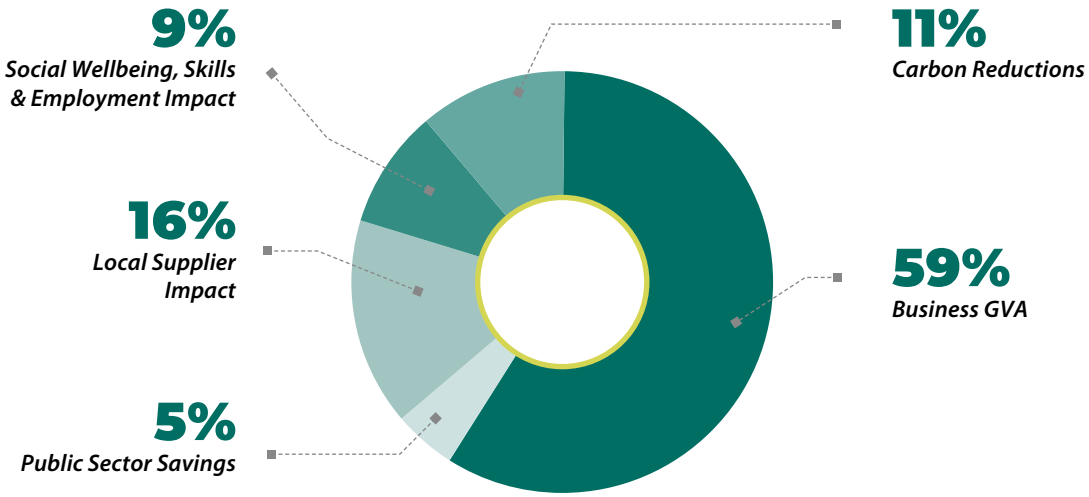

Legend
The Isle of Wight
Subsidy Control Status
Gigabit Black
Gigabit Grey
Gigabit Under Review
Gigabit White
Cowes
East Cowes
Ryde
Oakfield
Camp Hill
Newport
Carisbrooke
Bouldnor
Yarmouth
Shalfleet
Freshwater
Totland
Brook
Bembridge
Sandown
Shanklin
Wroxall
Ventnor
Niton
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, Geo Base, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) Open Street Map contributors, and the GIS User Community


Legend
Health (Higher the least health deprivation)
2
3
4
5
6
7 - 8
Cowes
East Cowes
Ryde
Oakfield
Camp Hill
Newport
Carisbrooke
Bouldnor
Yarmouth
Shalfleet
Totland
Brook
Bembridge
Sandown
Shanklin
Wroxall
Ventnor
Niton

Headline Findings

Total Impact Value of Gigabit Broadband - £556m between 2018 and 2030



On the Isle of Wight, gigabit-capable broadband across the island could generate the following by 2030.

- **£328M** of new business gross value added (GVA) and £73M business GVA safeguarded by 2030. This figure would reach £86M of new business GVA added per annum by 2030.

- **c.£2M** of cashable public sector network savings by 2030.

- Over **£3.5M** savings per annum across the public sector, from 2024, with a new integrated plan for remote digital healthcare, if completed in conjunction with an integrated plan for digital inclusion and upskilling.

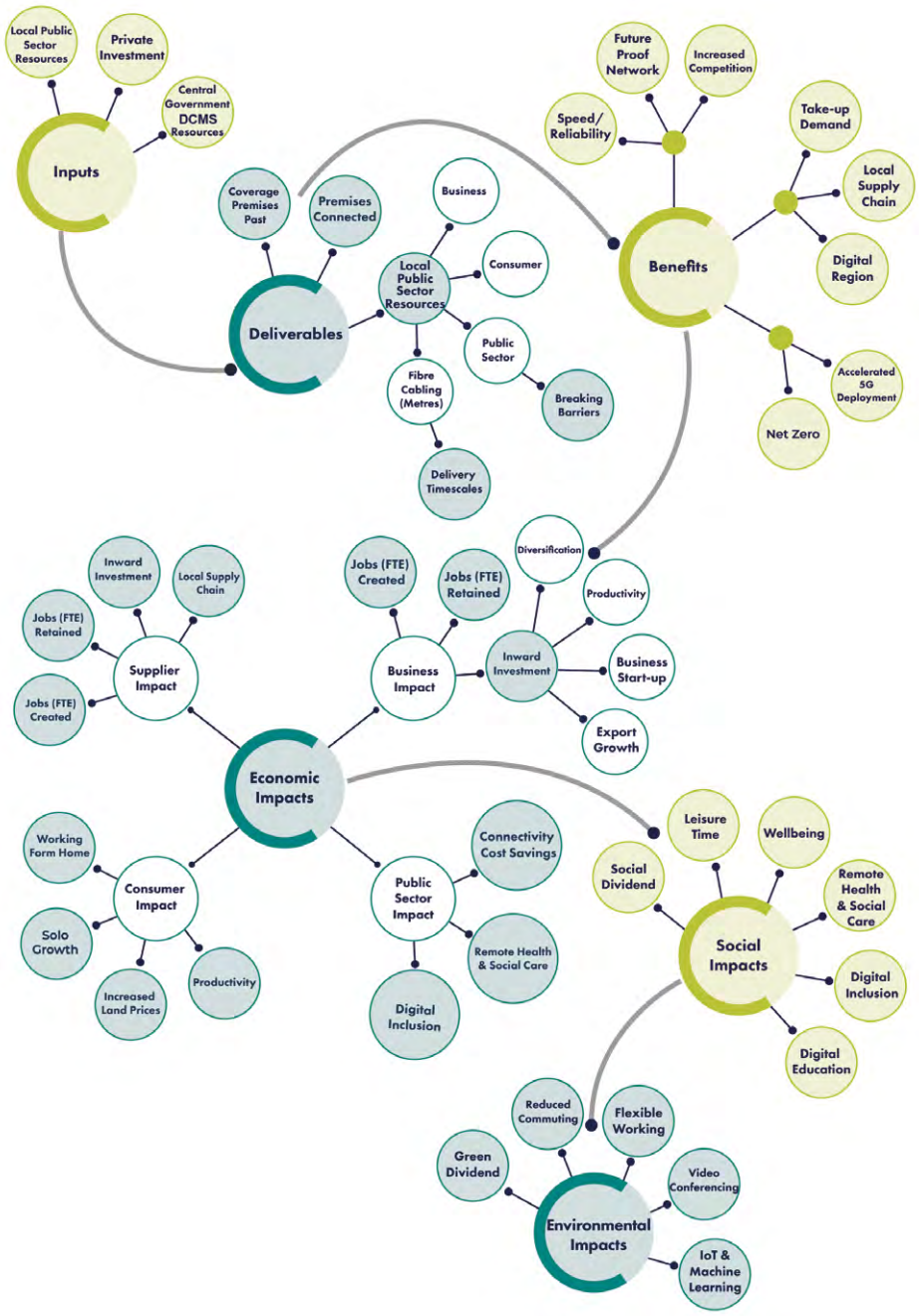
- **£110M** of local investment will have been made by WightFibre by 2030, a local, independent broadband provider with the most significant full-fibre broadband presence on the Isle of Wight. There are **over 100** full-time employees based on the island. Local engineering contractors, suppliers, and resources are also being indirectly employed to support the infrastructure and services on the island. [vii]

- A social wellbeing, digital inclusion, upskilling, and employment impact of £50.2M by 2030.

- Over **£62.6M** of equivalent carbon taxation savings by 2030 (including over £12M per annum by 2030).

Measuring the Impact of Gigabit Broadband on the Isle of Wight

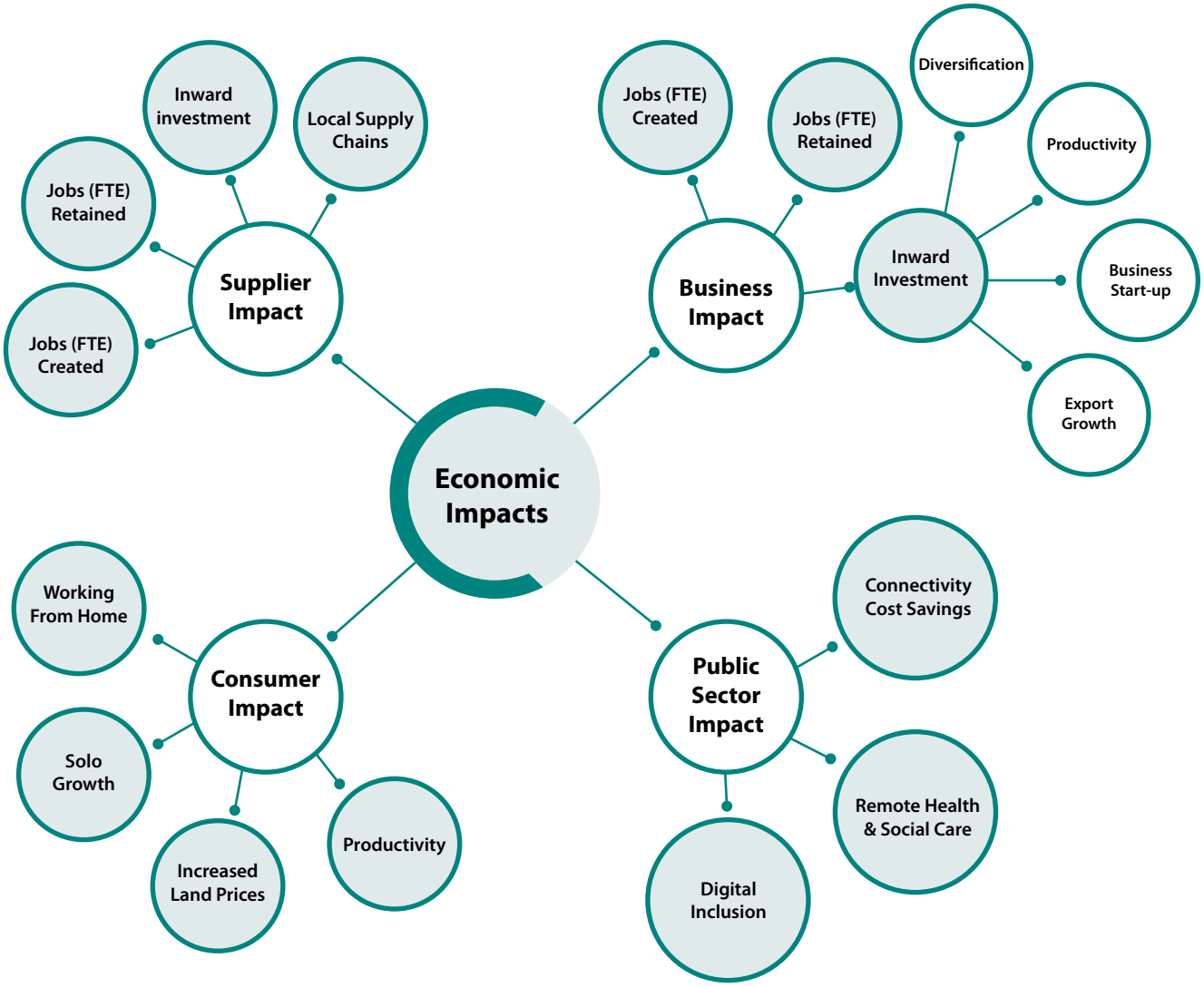
Figure 1: Model to Evaluate the Impact of Gigabit Broadband on Isle of Wight



* ONS data documents 10,340 registered businesses on the Isle of Wight and BEIS data indicates a further c.50 per cent will be unregistered businesses.[viii] The increasing availability and take-up of full-fibre broadband continues to provide major opportunities for increased employment and higher wage employment, whether this be additional local jobs, new inward investment, new start-up businesses, or new remote workers moving to the island. Current employment stands at c.55,400 people, with 9,900 of these being self-employed. The number of unemployed people is 2,800, with 19 per cent of households being workless, compared to 11 per cent in the rest of the South East of England.

Economic Benefits

Figure 2: Economic Impacts Model



Business GVA

Faster broadband stimulates productivity growth, increased revenue, diversification, and export potential.

Full-fibre broadband will help a**ccelerate the growth** of small business and home office start-ups, sole traders, flexible working, and new teleworkers living or relocating in the county. New business start-up growth and a significant increase in remote working jobs advertised since 2020 have a dependency on gigabit-capable broadband availability. According to the Cisco Broadband Index (2022), 51 per cent of workers now rely on home Internet to work from home or run their businesses and 71 per cent believe that everyone should be able to access fast, reliable Internet regardless of location.[ix]

Gigabit broadband drives new business services and innovation – including video communications, cloud computing, CCTV and security, and Internet of Things (IoT) – with no limitations on the number of users or company network access.

This could create **£328M** of new business GVA and £73M business GVA safeguarded by 2030 for the Isle of Wight. This figure would reach £86M of new business GVA added per annum by 2030. This impact has started, with full-fibre broadband available to 77 per cent of the island, but it is vital that the whole island be able to benefit – including businesses everywhere for true levelling-up opportunities[x].

Overall, by 2030, gigabit-capable broadband could have created over 1800 new jobs and safeguarded a further 450 existing jobs. These will be created through the growth and success of existing businesses, including those in the composites, advanced manufacturing, and marine and maritime sectors, and new micro and start-up businesses, where the island already has a good track record. It has also already been proven that new employment opportunities exist for existing workless people, whether they be carers, parents, or aged over 60, all would be able to return to work with the availability of full-fibre broadband.

In 2021 alone, 550 new Isle of Wight businesses started trading, with most of these being sole traders requiring reliable and value-for-money broadband. The island already benefits from an entrepreneurial culture, with micro businesses accounting for 85 per cent of local businesses. In addition, new remote workers will continue to relocate to the island and current residents will work more (or exclusively) from home – facilitated by world-class connectivity infrastructure. The post-COVID-19 pandemic work environment must accommodate these trends and provide a work/life balance, which can only be supported by gigabit-capable broadband for reasons of availability, reliability, and affordability.

The local Council Housing Strategy (2020–25) rightly highlights these trends and opportunities.

"This emerging trend is national and due to working families and individuals seeking greener and more viable places to live and work based on changed working patterns, lifestyle choices, and the improving digital connectivity in rural environments. The pandemic has also taught many companies and individuals that working from home is a viable option and has many benefits, including reducing the need for the daily commute – which fits in with the so-called "green recovery" and the family responsibilities of many employees. As indicated, there are signs of larger homes with open space already becoming more popular in the housing market with islanders, and those who want to move their families here to work and run businesses, not just retire." [xi]

It is also possible that the economic impact of improved connectivity could be even greater if the full aspirations of the Digital Island Strategy (2019–27) can be delivered in terms of new jobs (estimated to be 12,000) and new homes (estimated to be 1,700).[xii]

There are further economic benefits not yet quantified in this report. These include the use of gigabit-capable broadband in the growth of small cells for 5G mobile networks. The future expansion of such networks is dependent on small cell site deployments on buildings, streetlights, transport stops and stations, and alike. All 5G network providers are open to working with local authorities to accelerate progress and simplify deployment, as demonstrated in the DSIT/BDUK Digital Connectivity Infrastructure Accelerator (DCIA) programme in 2022.[xiii]

Public Sector Cashable Savings

More affordable connectivity for public sector office and hub locations should realise c.£2.4M of cashable savings between 2025 and 2030, whether achieved individually by organisations or, preferably, through new combined procurements to secure the savings. The opportunities for improved services and savings include organisations in local government, health, education, emergency services, and the voluntary and community sector (VCSE), which includes over 2,000 sites across the island.

Public Sector Digital Healthcare Savings

- Opportunity to expand technology-enabled care and digital health service monitoring services, thus, reducing the need for face-to-face healthcare for routine or observation appointments.

- This could be significant for the Isle of Wight, with 29.2 per cent of the population being over 65, compared to the national average of 18.6 per cent. In fact, this is expected to grow to over 31 per cent by 2026. The population of the island could increase by more than 30,000 by 2033, the equivalent of the town of Ryde or Newport.

- As documented in the NHS Long-term Plan (2019), digitally enabled primary and outpatient care will go mainstream across the NHS. Over the next five years, every patient in England will have a new right to choose this option – usually from their own practice or, if they prefer, from one of the new digital GP providers.[xiv] This has become even more popular and relevant since the COVID-19 pandemic – there were approximately 4.5 million video consultations in England between March 2020 and March 2021.[xv]

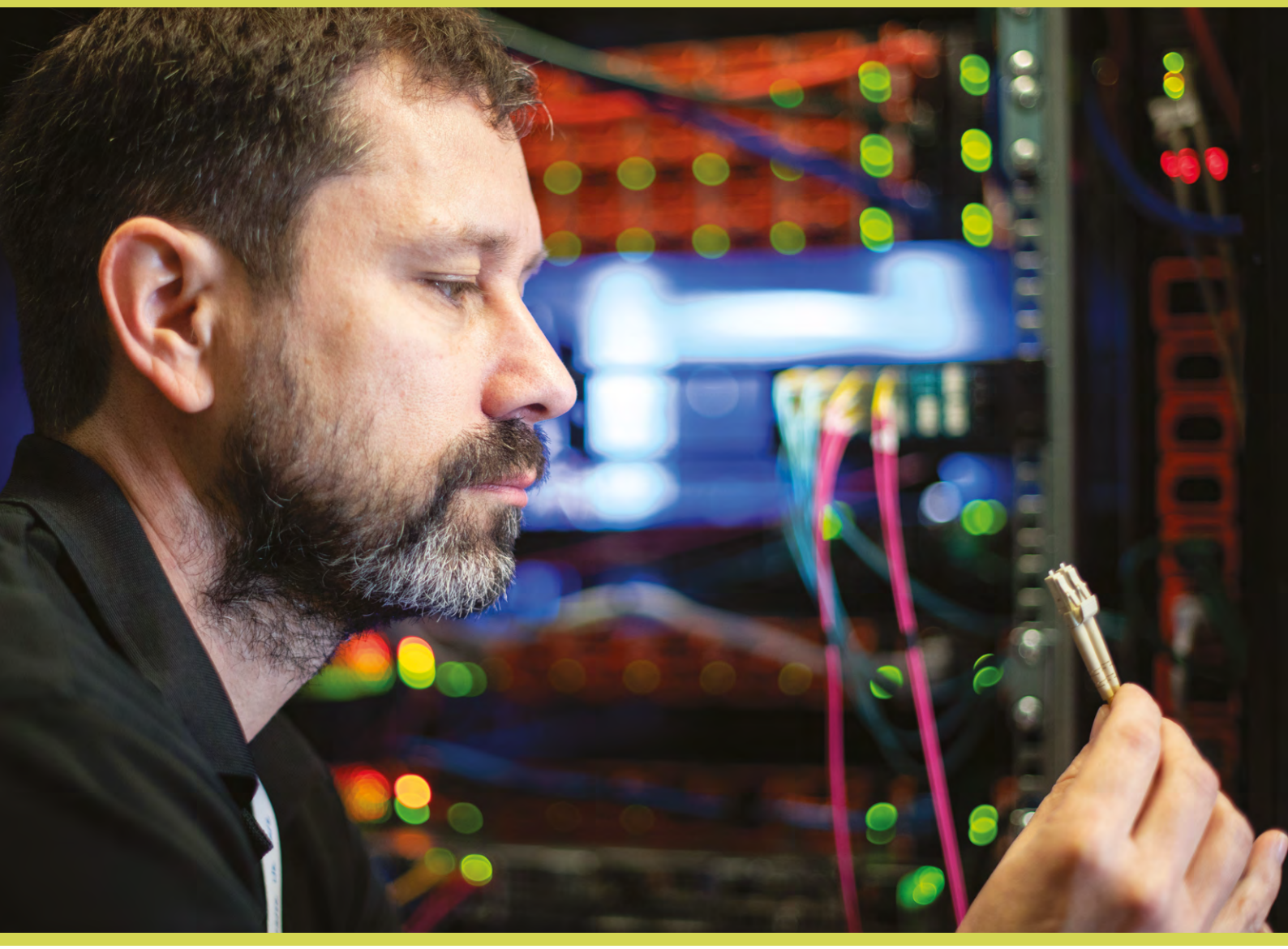
- The Crown Commercial Service has launched a new approved route to market from NHS England for virtual wards, long-term conditions (remote monitoring), continuous monitoring, and spot monitoring.[xvi] This provides digitally enabled clinical care pathways for buyers such as commissioners within NHS England, social care organisations, integrated care systems, primary care networks, NHS trusts, and NHS special health authorities.

The Isle of Wight, as part of the Hampshire and IoW NHS Integrated Care Board, acts as a microcosm of the UK healthcare system. So, with improved connectivity, it will become a perfect place to test and launch new digital healthcare solutions. It can also realise new models of delivery, such as virtual wards and remote monitoring, where patients can access services from home, facilitated by healthcare workers who will also be online at home. Across Hampshire and the Isle of Wight, there are already 13 virtual wards (1700 current patients and, overall, 8000 since they started) that cover a range of conditions from strokes to frailty to respiratory conditions. Hundreds of patients are supported by virtual wards every week. These virtual wards provide hospital-level care and remote monitoring in patient's own homes, facilitated by reliable and secure home broadband.[xvii]

The Isle of Wight provides a unique opportunity to engage with the NHS and independent healthcare services and work directly with their clinicians and researchers.

Care monitoring alarms will require replacement by 2025 as BT switches off its analogue network. Agile new fibre alternatives will provide opportunities for resilience and innovation in these services. The South East of England digital switchover is currently planned for the spring of 2024, although BT will not yet complete customers with a healthcare pendant, those who only use landlines or who have no mobile signal, or those who have any additional needs. Crucially, this can only be the case where BT has this data or information, and customers are being asked to update their records with BT.[xviii]

In conjunction with an integrated plan for digital inclusion and skills, a future plan for remote digital healthcare could generate over £21M savings between 2025 and 2030 across the public sector.



Local Supplier Impact

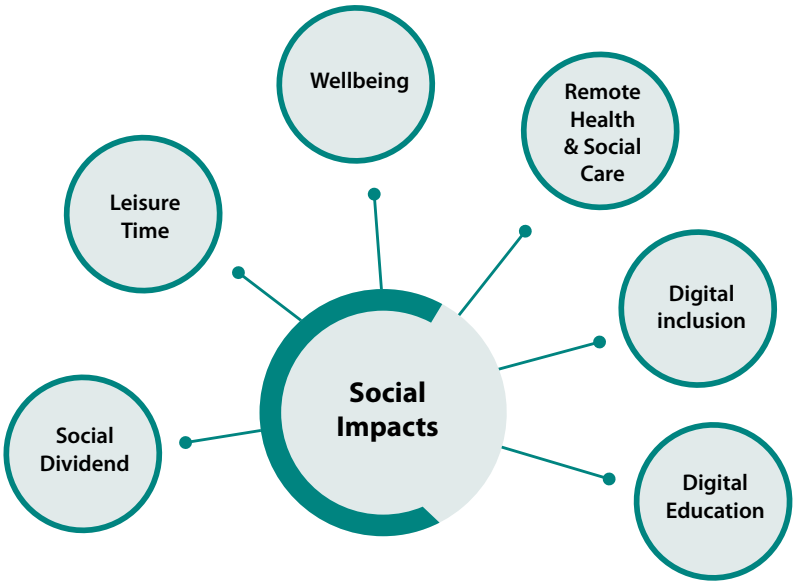
WightFibre, an exceptional local business on the Isle of Wight since 2001, has owned and operated its own telecommunications infrastructure entirely independently of BT Openreach. WightFibre provides phone, TV, and broadband services to homes and businesses on the Isle of Wight. Only WightFibre has committed to building a full-fibre broadband network across the whole island.

The WightFibre Gigabit Island Project will see full-fibre broadband deployed to over 74,000 homes and businesses across the island by 2024 and is already available to 67,000 households. The project will see over 80,000 homes and businesses connected to the network by 2027.

WightFibre is part of the fabric of the island, with currently over 100 full-time employees living and working on the island. Local engineering contractors, suppliers, and resources are also being indirectly employed to support the infrastructure and services.

Social Impact

Figure 3: Social Impacts Model



A key focus area within the Isle of Wight Council's Corporate Plan is around social wellbeing, i.e. education, healthcare, and social support.[xix] All these are significant challenges compounded by the physical separation from the mainland. Digital connectivity and inclusion are essential to address and improve these challenges; specifically targeting the elderly (over 65's), the unemployed and unskilled workforce, and under 18's, in terms of education and skills.

A lack of digital skills and access can have a huge negative impact on a person's life, leading to poorer health outcomes and a lower life expectancy, increased loneliness and social isolation, and less access to jobs and education. It can mean paying more for essentials, financial exclusion, and an increased risk of experiencing poverty. People who are digitally excluded also lack a voice and visibility in the modern world, as government services and democracy are increasingly moving online. What is more, it is those already at a disadvantage – through age, education, income, disability, or unemployment – who are most likely to be missing out, further widening the social inequality gap.

Gigabit-capable broadband will play a major part in addressing digital inclusion and the digital divide that affects all age and socio-economic groups. It is possible to measure the impact of this infrastructure on wellbeing, skills, education, and employment opportunities but it is important to support individuals with the digital skills and confidence needed to get online and fully utilise services and apps that will benefit them.

There is a projected £222.25 impact on well-being per household, per annum[xx]. In addition, there is an estimated £1,000 wellbeing value for individuals with low or exceptionally low essential digital skills[xxi]. In the Lloyds Bank Consumer Digital Index (2022), some 38 per cent of people in the South East had low or exceptionally low digital skills, and this is likely to be even higher with the more elderly population on the island. On the Isle of Wight, it has previously been estimated that 6.5 per cent of adults have never used the Internet or have not in recent months.[xxii]

There is also a one-off benefit of £807 for those seeking employment, which is typically now done online and is where essential digital skills for work are required. In the South East, some eight per cent of people have no digital abilities for work and only 41 per cent of people have the ability to do all 20 essential digital tasks necessary for work.[xxiii]

New evidence is also available regarding bringing groups that were previously excluded from the workforce into employment, which would lower inequality and poverty. Through home and flexible working, employers will be able to retain experienced employees (at least on a part-time basis) whom they would otherwise lose due to their age or caring responsibilities. These opportunities will be created right across the UK, provided the digital infrastructure is in place to support them, helping to address issues of regional inequality.[xxiv]

According to the Cisco Broadband Index (2022), 69 per cent of people believe that fast, reliable Internet is critical to a well-educated population. In addition, digital poverty studies have identified over a million children in the UK who are falling behind because half of all set homework is completed online and slow, unreliable broadband (especially in rural areas) impacts their ability to complete this satisfactorily.[xxv]

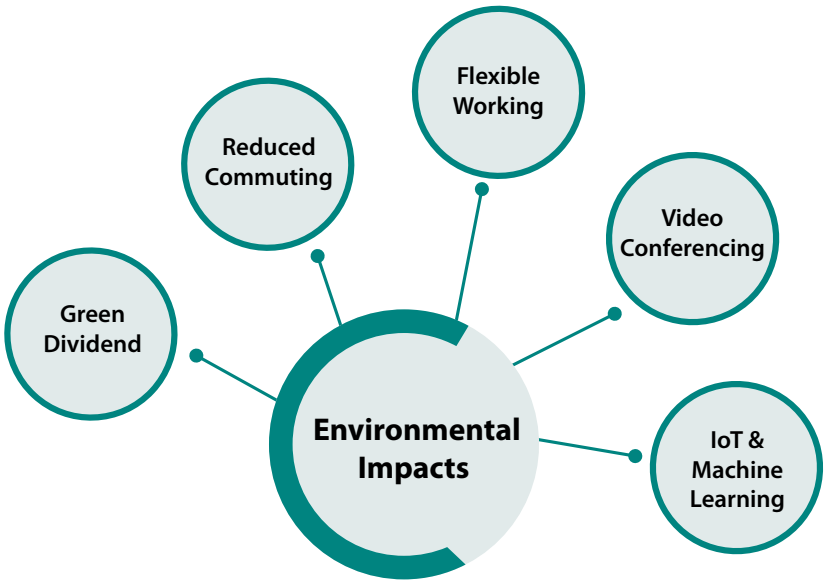
Social tariffs for broadband services are particularly important for digital inclusion, especially for those on Universal Credit, Pension Credit, and other welfare benefits. Providing an affordable service opens these wellbeing, employment, education, and health opportunities for all, an example being the WightFibre Social Tariff product, Essential Broadband.[xxvi] Providing a free or reduced-price service for a digital hub in a community also creates the potential for maximising digital inclusion and building confidence and usage, to the point where the Internet becomes essential and can help transform lives. With over 1700 VCSE organisations on the island, there is significant scope for improved provision and transfer of digital support and skills development.

The combination of these impacts will benefit Isle of Wight citizens positively, by over £50M by 2030.

This figure is also consistent with other research, which suggests that for every £1 spent on digital inclusion, there is almost £10 benefit to UK PLC. This includes the social, wellbeing, and economic impact.[xxvii]

Environmental Impact

Figure 3: Environmental Impacts Model



The un-spoilt nature of the island is nationally recognised. Fifty per cent of the island is designated as an Area of Outstanding Natural Beauty (AONB) and there are 32 designated Conservation Areas and over 2,000 listed buildings across the island. In addition to national designations, European Sites increase the total protected area to 70 per cent. The coastline brings challenges of flood risk and coastal erosion, requiring a plan to avoid, mitigate and adapt to flowing and erosion.

Therefore, world-class, and secure digital connectivity is fundamentally important to the plans for a Net-Zero future, with the island playing its part in the wider UK and European ambitions for environmental change. According to the Royal Society, digital technology could deliver almost one-third of the carbon emission reduction required by 2030.[xxviii]

Experts at the Centre for Economics and Business Research (Cebr) took a closer look at the impact of a fully fibred nation. Their report found that a faster and more reliable full-fibre connection can give people the same levels of access to everything they can do online in an office, remotely from home. The research suggests that by enabling more people to work from home, a full-fibre nation could save 300 million commuting trips each year – with three billion fewer kilometres travelled by car. That is a saving of more than 360,000 tonnes of CO2 emissions. A further study by Telework Research Network suggests that if half the UK workforce worked from home just twice each week, it would reduce UK transportation emissions by 4 per cent, the equivalent of taking 2.5 million cars off the road.[xxix]

The Cebr research suggested that the estimated UK wide environmental impact of an additional 1,911,868 workers mainly working at home would be an annual saving of just over 700,000 tonnes of CO2 emitted from car commuting trips. In addition, other public and private organisation service visit savings being replaced by telecare, remote monitoring, or virtual ward appointments would increase this further.

Based on these estimates, the additional impact of gigabit broadband on the Isle of Wight could be over £62.5M of equivalent carbon taxation savings by 2030 (over £12 million per annum by 2030).

Glossary and Sources

Gigabit-capable Broadband

Gigabit-capable broadband means download speeds of at least one gigabit-per-second (1 Gbps or 1000 megabits per second, Mbps). A 1 Gbps download speed would allow a high-definition film to be downloaded in under 1 minute.

Gigabit-capable broadband can be delivered by a range of technologies, including full-fibre connections, high-speed cable broadband and, potentially, 5G networks.[xxx]

Subsidy Control Status

Subsidy Control has been set up and defined by Building Digital UK (agency of the Department of Science, Innovation and Technology DSIT) to determine which areas, postcodes, and premises are eligible for gigabit broadband public funding. This also informs the market where broadband operators have active and planned services within the next three years. This process is heavily reliant on the operators' market investment plans assessed through Open Market Review and Public Review processes. As a result, each unique premise is marked with a colour key: white for no current commercial service or plans, black for two or more current operators, grey for one existing provider or firm plans to offer gigabit service, and blue for one or more providers with commercial plans but some uncertainty. Further information can be found at www.gov.uk/government/publications/project-gigabit-uk-subsidy-advice/open-market-review-omr-and-public-review-pr-subsidy-control-classification-guidance

Registered Businesses

The data contained in the table are compiled from an extract taken from the Inter-Departmental Business Register (IDBR) recording the position of units as of March of the reference year. The IDBR contains information on VAT traders and PAYE employers in a statistical register, which provides the basis for the Office for National Statistics to conduct surveys of businesses.

The table presents an analysis of businesses at both enterprise and local unit levels. An enterprise is the smallest combination of legal units (generally based on VAT and/or PAYE records), which has a certain degree of autonomy within an enterprise group. An individual site (for example a factory or shop) in an enterprise is called a local unit.

Unregistered Businesses

These are typically sole traders who do not have to register with Companies House and may not be registered for VAT. However, they do have to maintain accounting records, pay income tax, and file a self-assessment return with HMRC every tax year.

Interactive map

View our interactive map inclusive of all maps in this report as well as other metrics here: https://chamberuk.com/gismaps/isle-of-wight-map/ or use the QR Code

Endnotes

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See Glossary for definitions.

vii WightFibre has identified £89.87m of spend locally (capex and opex) between 2018 and 2030.

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