



Connecting the Countryside

A WPI Strategy report for Vodafone UK

November 2023

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WPI Strategy is one of the UK's leading political communications consultancies, with a track record of delivering high impact public affairs campaigns. We offer senior strategic counsel and work extensively with our sister company, WPI Economics, to ensure that campaigns are underpinned by evidence-based content.

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About Vodafone

Vodafone UK connects people, businesses and devices to help our customers benefit from digital innovation. Our services span mobile, fixed line, broadband and the Internet of Things (IoT). We employ around 11,000 people across the UK, and operate more than 420 retail stores nationwide.

Having made the UK's first mobile phone call and sent the first text, Vodafone has a history as a tech pioneer. In 2018 we made the UK's first live holographic call using 5G, and were the first to start carrying live 5G traffic from a site in Salford, Greater Manchester. Today we serve over 18 million mobile and fixed line customers in the UK, with 4G network coverage at 99 per cent. Vodafone has launched 5G in 100 places across the UK so far. Our customers voted us the UK's Best Network Provider at the 2020 Trusted Reviews Awards. To help deliver Gigabit UK, we are rolling out full fibre broadband across 12 towns and cities in partnership with CityFibre, reaching one million homes and business by 2021.

Our ReConnect programme is supporting women and men back into work after a career break, our IoT technology is working to create a low-carbon society, and our free Digital Parenting magazine is helping families across the UK to navigate the online world safely. For two years running, we have been named one of the UK's 25 Best Big Companies to Work For by the Sunday Times, and a Top 100 Employer by Stonewall.

Vodafone is taking significant steps to reduce our impact on our planet by reducing our greenhouse gas emissions by 50% by 2025 and becoming net zero by 2040, purchasing 100% of our electricity from renewable sources by 2025, and reusing, reselling or recycling 100% of our redundant network equipment.

We are part of Vodafone Group, one of the world's largest telecommunications companies, with mobile operations in 21 countries, partnerships with mobile networks in 42 more, and fixed broadband operations in 17 markets. As of 30 June 2020, Vodafone Group had approximately 300+ million mobile customers, 27 million fixed broadband customers and 22 million TV customers, including all of the customers in Vodafone's joint ventures and associates.

For more information about Vodafone UK, please visit: www.vodafone.co.uk

Foreword

As the cost-of-living crisis continues to bite, our ongoing work to provide connectivity to those who need it most is more important than ever. We are all too aware that the digital divide is only becoming more isolating for people as everyday, essential tasks increasingly require people to be online.

Already we are partnering with Good Things Foundation in its strategy to fix the digital divide. This includes a donation of 200,000 SIM cards with 24 million gigabytes of data to the National Databank for distribution through its growing UK network of digital inclusion hubs. This is part of our plan to help 4 million people in total by 2025, enabling people from all over the UK to access vital services and stay in touch with family and friends.

However, no amount of device donations, SIM cards or free data can fully bridge the digital divide if we don't have a truly nationwide 5G network connecting those hardest to reach communities.

This timely research is a stark reminder just how pressing this issue is for communities across Great Britain, and that some of the most vulnerable people are in some of the most remote parts of the country.

5G connectivity can play a significant role in supporting families and local communities. Such is the pace of change in the digital world that, while any level of connectivity is welcome, 5G coverage will be key for many communities to thrive in the future.

The rollout of 5G across the country should be treated as a matter of urgency if we are to continue to narrow, rather than widen, the digital divide.

By investing £11 billion to deliver 5G Standalone coverage to 99% of the UK population by 2034, our proposed merger with Three UK will bridge the rural digital divide with a genuine nationwide 5G network.



Ahmed Essam
Vodafone UK CEO

Executive summary

- **Over 800,000 people living in most deprived rural communities in Great Britain could see huge benefits from the fast roll out of 5G Standalone (5GSA).**
- **The vast majority (99.4%) of rural constituencies are classed as total or partial not-spots for 5G coverage -** compared to 66% of urban constituencies. This comprises 4.87 million people living within rural not-spots across the entirety of Great Britain.
- **Nearly half (46%) of constituencies that are both rural and amongst the 40% most deprived areas in the country are classified as 5G total not-spots.** This compares to just 2.7% in predominantly urban constituencies with a similar degree of deprivation.
- Certain nations and regions perform particularly poorly. **Scotland and Wales, as well as East Anglia (Norfolk and Suffolk), Cumbria, and the South West (Devon, Cornwall, Somerset)** have some of the highest average not-spot rates, and have multiple constituencies ranked in the 30% lowest-ranked constituencies on the index.
- The proposed deal between Vodafone UK and Three UK will close the digital divide that exists between rural and urban areas of Britain by delivering over **95% 4G geographic coverage by 2027. Vodafone will invest £11bn to build a nationwide 5GSA network, bringing 5GSA to 99% of the UK population and 95% of the UK's landmass by 2034.**



Chapter 1. The 5G coverage challenge

5G connectivity is almost completely absent across all rural areas of Great Britain. 99.4% of rural constituencies are classed as not-spots or partial not-spots for 5G coverage, in comparison to 66.2% of urban constituencies.

This nationwide lack of 5G in rural areas in part reflects the difficulty in extending mobile connectivity infrastructure to these harder to reach parts of the country. The challenging investment environment in the UK means that the Return on Capital Employed (ROCE) for 5G infrastructure is relatively low, even in urban areas. But in rural communities, these challenges are magnified to the extent that the demand to justify the investment is insufficient. Indeed, this is why the UK Government has intervened in the rollout of 4G infrastructure in rural areas, through the Shared Rural Network programme. Even when some connectivity is available in rural areas, it is often hampered by lower bandwidth and higher latency.¹

As 5G becomes increasingly incorporated into everyday life, whether it be in healthcare, education, manufacturing or domestic use, it is crucial that people living in areas experiencing deprivation are able to stay connected. For people living in rural areas, access to the network could allow them to access innovative service solutions such as remote GP appointments which remove the need to travel long distances, virtual classrooms that enable young people to access specialist teaching, or business banking services that help support the running of small and medium sized businesses.

Equally pertinent when considering the issue of deprivation is not just the innovative solutions of the future which 5GSA could enable, but the need for greater connectivity to allow rural areas to keep up with the ongoing migration of essential services into the online world. For instance, access to services such as elements of the tax system, voter registration or even job applications are often exclusively available online. Moreover, the ability to research and develop awareness of such services commonly comes from access to the internet.² Crucially, for the many people on low incomes who are often most in need of these essential government services, mobile connectivity which only requires a mobile device, rather than fixed home broadband, is the more accessible option.

The ability to access in-person services locally is often also heavily dependent on accessing information online. For instance, many local shops and services such as post-offices, chemists and banks advertise altered hours exclusively online - creating a situation whereby even physical access can be undermined by a lack of digital intelligence required to navigate local services. This has led to a growing number of so-called “proxy users”, digitally excluded individuals who rely on others to navigate the internet on their behalf.³

In order to chart the relationship between mobile connectivity and deprivation, Vodafone commissioned WPI Economics to create a Coverage/Deprivation Index. This is a score of an area's 4G and 5G connectivity, weighted by standardised deprivation rankings.

In identifying constituencies which suffer from both relatively higher levels of deprivation and lower levels of connectivity, it identifies constituencies which are most in need of the potential benefits that 5G connectivity can enable. Conversely, these same constituencies risk being subject to a widening digital divide if 5GSA is not rolled out quickly across Britain.

Cases of higher deprivation and lower connectivity levels coinciding are more common in rural constituencies: of the 20% worst performing constituencies on the index, 130, or 92.8%, are rural.

And of the constituencies which are both rural and in the 40% most deprived constituencies in Great Britain, 46.1% are 5G total not-spots. This rises to 100% when we consider those which are either total or partial 5G not-spots. Even in the areas that do have 5G, this is by and large exclusively non-standalone.

Non-standalone overlays 5G equipment on existing 4G infrastructure, which offers significant improvements on what was previously available and allows the delivery of much higher-speed connectivity to consumers with 5G-enabled devices, but is not what is required for some of the industrial, business-facing and public service use cases full 5G will enable. But while this would bring considerable benefits to consumers in terms of faster connections, it would not allow many of the most exciting potential use cases that 5GSA can bring, such as greater coverage and reliability, to enhanced security and better battery performance for devices.

If the same level of 5G coverage which we currently see in urban areas were extended to these rural constituencies, we estimate that 838,000 more people in relatively deprived rural communities would have some access to 5G, where none currently exists. On top of this, 780,000 more people in relatively deprived rural constituencies would benefit from receiving 5G coverage from all operators of 5G.

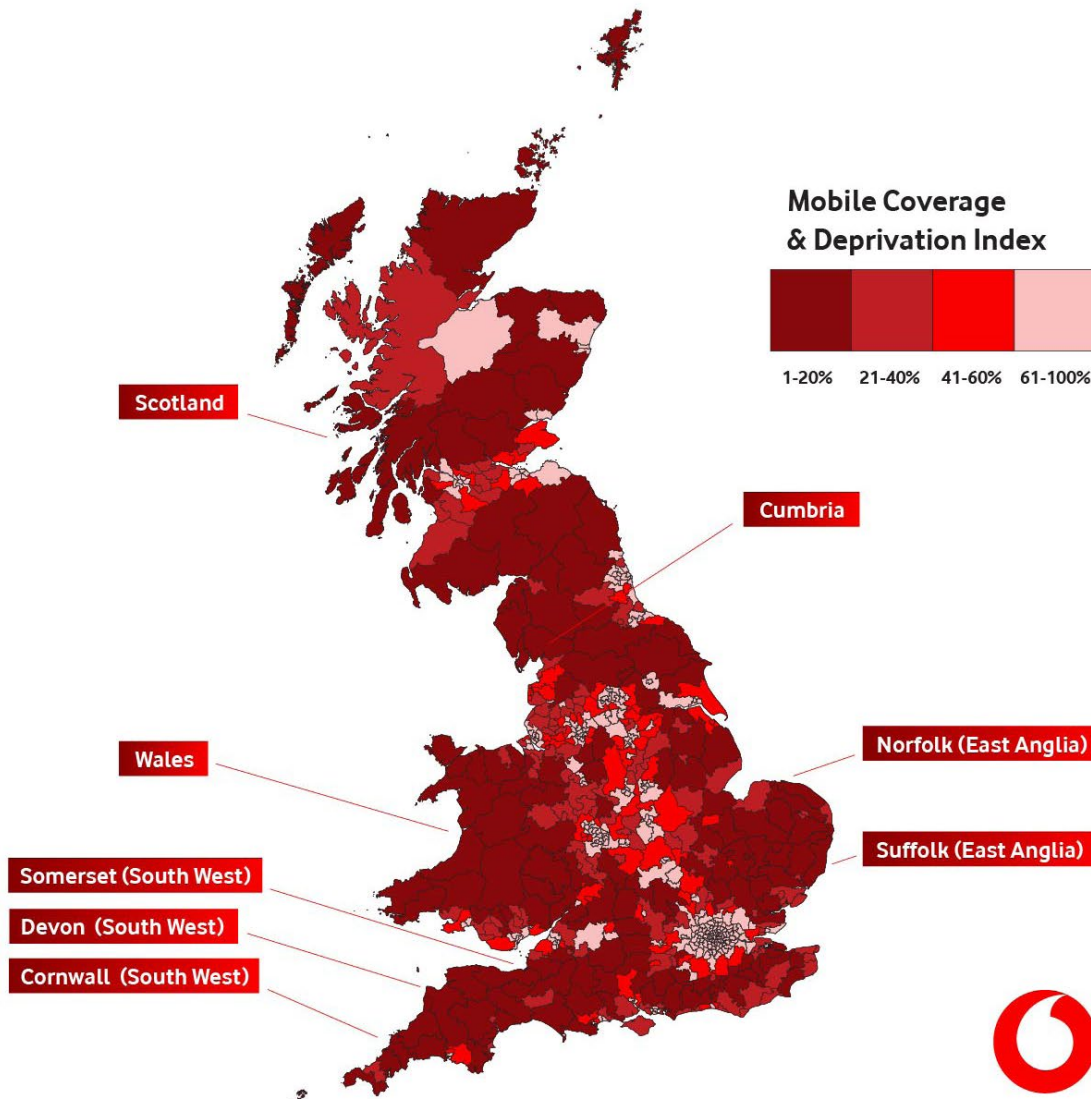


Coverage by constituency

While there are no parts of the country where rural constituencies are immune from this connectivity challenge, certain nations and regions perform particularly poorly. Scotland and Wales, as well as the English regions of East Anglia (**Norfolk and Suffolk**), Cumbria, and the South West (**Devon, Cornwall, Somerset**) have some of the highest average not-spot rates, and have multiple constituencies ranked in the 30% lowest-ranked constituencies on the index.

Did you know...

Nearly half of rural, deprived areas in Britain have no 5G coverage, compared to just 2.7% of urban, deprived areas. Five areas perform particularly poorly...



Scotland

17 out of 59 or almost 3 in ten (29%) of Scottish constituencies are both rural and fall within the worst 30% of the Coverage/Deprivation index. 42% of premises in Scotland's rural constituencies are in 5G total not spots.

Constituency	Rural/ Urban group	Coverage / Deprivation index percentile (1 is worst)	Poor coverage percentile (1 is worst)	Deprivation quintile (1 is lowest)	5G Not-spots (%)	5G partial not-spots (%)
Na H-eileanan An Iar	Predominantly Rural	1	1	3	100	0
Orkney and Shetland	Predominantly Rural	1	1	4	100	0
Argyll and Bute	Predominantly Rural	1	1	3	72.32	27.68
West Aberdeenshire and Kincardine	Predominantly Rural	2	3	5	58.08	41.92
Caithness, Sutherland and Easter Ross	Predominantly Rural	3	3	2	80.12	19.88
Moray	Predominantly Rural	5	5	4	66.59	33.41
Banff and Buchan	Predominantly Rural	6	5	3	91.95	8.05
Dumfriesshire, Clydesdale and Tweeddale	Predominantly Rural	7	7	4	74.31	25.69
Dumfries and Galloway	Predominantly Rural	8	7	2	44.13	55.87
Stirling	Predominantly Rural	8	8	5	39.59	60.41
Berwickshire, Roxburgh and Selkirk	Predominantly Rural	10	10	3	53.43	46.57
Perth and North Perthshire	Predominantly Rural	12	12	4	33.38	66.62
North Ayrshire and Arran	Urban with Significant Rural	14	11	2	38.03	61.97
Ochil and South Perthshire	Predominantly Rural	14	14	4	47.53	52.47
Angus	Urban with Significant Rural	19	16	3	54.35	45.65
Ross, Skye and Lochaber	Predominantly Rural	21	19	4	60.37	38.6
Ayr, Carrick and Cumnock	Predominantly Rural	23	18	2	26.42	73.58

Constituency	Rural/ Urban group	Coverage / Deprivation index percentile (1 is worst)	Poor coverage percentile (1 is worst)	Deprivation quintile (1 is lowest)	5G Not-spots (%)	5G partial not-spots (%)
Kilmarnock and Loudoun	Predominantly Rural	32	27	2	23.04	76.96
Lanark and Hamilton East	Urban with Significant Rural	32	28	2	19.95	80.05
Cumbernauld, Kilsyth and Kirkintilloch East	Urban with Significant Rural	33	30	2	29.03	70.97
Airdrie and Shotts	Urban with Significant Rural	35	27	1	26.64	73.36
Livingston	Urban with Significant Rural	45	45	3	16.25	83.42
North East Fife	Predominantly Rural	46	46	5	14.98	84.06
Dunfermline and West Fife	Urban with Significant Rural	47	46	4	7.66	91.41
Midlothian	Urban with Significant Rural	52	51	3	7.23	89.85
Gordon	Predominantly Rural	60	60	5	38.48	49.69
Paisley and Renfrewshire North	Urban with Significant Rural	62	62	4	11.97	74.88
Inverness, Nairn, Badenoch and Strathspey	Urban with Significant Rural	66	65	4	21.39	58.97

Wales

20 out of 40 or 50% of Welsh constituencies are both rural and fall within the worst 30% of the Coverage/Deprivation Index. Welsh rural constituencies have an average of 53.8% of premises in 5G total not-spots.

Constituency	Rural/ Urban group	Coverage / Deprivation index percentile (1 is worst)	Poor coverage percentile (1 is worst)	Deprivation quintile (1 is lowest)	5G Not-spots (%)	5G partial not-spots (%)
Ynys Môn	Predominantly Rural	1	1	3	78.64	21.36
Dwyfor Meirionnydd	Predominantly Rural	1	1	4	75.29	24.71
Montgomeryshire	Predominantly Rural	1	1	4	70.99	29.01
Cynon Valley	Urban with Significant Rural	2	2	1	60.55	39.45

Constituency	Rural/ Urban group	Coverage / Deprivation index percentile (1 is worst)	Poor coverage percentile (1 is worst)	Deprivation quintile (1 is lowest)	5G Not-spots (%)	5G partial not-spots (%)
Ceredigion	Predominantly Rural	2	2	3	56.52	43.48
Carmarthen East and Dinefwr	Predominantly Rural	3	2	3	64.44	35.56
Brecon and Radnorshire	Predominantly Rural	3	3	5	70.34	29.66
Preseli Pembrokeshire	Predominantly Rural	4	4	3	62.24	37.76
Clwyd West	Urban with Significant Rural	4	4	4	62.34	37.66
Carmarthen West and South Pembrokeshire	Predominantly Rural	5	5	3	49.23	50.77
Monmouth	Urban with Significant Rural	5	7	5	25.51	74.49
Clwyd South	Predominantly Rural	7	7	3	77.55	22.45
Delyn	Urban with Significant Rural	8	9	5	89.66	10.34
Alyn and Deeside	Urban with Significant Rural	10	13	5	53	47
Arfon	Predominantly Rural	11	10	4	80.38	19.62
Neath	Urban with Significant Rural	11	9	2	18.18	81.82
Aberconwy	Predominantly Rural	13	14	5	63.63	36.37
Merthyr Tydfil and Rhymney	Urban with Significant Rural	17	12	1	8.73	91.27
Llanelli	Urban with Significant Rural	24	19	2	19.02	80.98
Vale of Clwyd	Urban with Significant Rural	26	22	2	84.99	15.01
Ogmore	Predominantly Rural	36	28	1	49.68	50.32
Gower	Urban with Significant Rural	41	44	5	37	62.72
Vale of Glamorgan	Urban with Significant Rural	50	50	5	10.95	86.82

Cumbria

In Cumbria, 5 out of the 6 total constituencies, and 100% of the rural constituencies, are in the worst 30% of the Coverage/Deprivation Index. Cumbrian rural constituencies have an average of 34.9% of premises in 5G total not-spots.

Constituency	Rural/ Urban group	Coverage / Deprivation index percentile (1 is worst)	Poor coverage percentile (1 is worst)	Deprivation quintile (1 is lowest)	5G Not-spots (%)	5G partial not-spots (%)
Westmorland and Lonsdale	Predominantly Rural	2	3	5	27.9	72.1
Penrith and The Border	Predominantly Rural	2	2	3	51.11	48.89
Copeland	Predominantly Rural	7	6	2	55.31	44.69
Barrow and Furness	Urban with Significant Rural	16	12	2	18.17	81.83
Workington	Predominantly Rural	19	15	2	23.18	76.82

Suffolk

In Suffolk, 5 out of 7 constituencies are both rural and in the worst 30% of the Coverage/Deprivation Index. Across these 5 constituencies, on average there are 46.5% of premises in a 5G total not-spot.

Constituency	Rural/ Urban group	Coverage / Deprivation index percentile (1 is worst)	Poor coverage percentile (1 is worst)	Deprivation quintile (1 is lowest)	5G Not-spots (%)	5G partial not-spots (%)
Suffolk Coastal	Predominantly Rural	3	3	4	61.85	38.15
Central Suffolk and North Ipswich	Predominantly Rural	8	9	4	55.08	44.92
South Suffolk	Predominantly Rural	13	13	4	55.25	44.75
Bury St Edmunds	Urban with Significant Rural	15	16	4	25.62	74.38
West Suffolk	Urban with Significant Rural	16	14	3	38.06	61.94

Norfolk

Of Norfolk's 9 constituencies, 6 are rural and in the worst 30% of the Coverage/Deprivation Index. Norfolk's rural constituencies have 50.2% of premises, on average, in a 5G total not-spot.

Constituency	Rural/ Urban group	Coverage / Deprivation index percentile (1 is worst)	Poor coverage percentile (1 is worst)	Deprivation quintile (1 is lowest)	5G Not-spots (%)	5G partial not-spots (%)
North Norfolk	Predominantly Rural	2	2	2	79.34	20.66
South Norfolk	Predominantly Rural	3	4	4	67.57	32.43
Broadland	Predominantly Rural	6	6	4	57.11	42.89
Mid Norfolk	Predominantly Rural	9	8	3	47.14	52.86
South West Norfolk	Predominantly Rural	18	14	2	40.82	59.18
North West Norfolk	Predominantly Rural	21	16	2	45.67	54.33
Great Yarmouth	Urban with Significant Rural	31	25	1	12.96	87.04

Somerset

7 out of 9 of Somerset's constituencies are both rural and in the worst 30% of the Coverage/Deprivation Index. 3 are in the worst 10%. Across Somerset's rural constituencies, they have an average of 16.5% total 5G not-spot.

Constituency	Rural/ Urban group	Coverage / Deprivation index percentile (1 is worst)	Poor coverage percentile (1 is worst)	Deprivation quintile (1 is lowest)	5G Not-spots (%)	5G partial not-spots (%)
Wells	Predominantly Rural	1	1	3	28.34	71.66
Somerton and Frome	Predominantly Rural	6	6	4	24.37	75.63
Bridgwater and West Somerset	Predominantly Rural	7	6	2	25.24	74.76
North East Somerset	Predominantly Rural	17	20	5	10.23	89.77
Taunton Deane	Urban with Significant Rural	20	18	3	7.76	92.24
Yeovil	Predominantly Rural	24	22	3	9.32	90.68
Weston-super-mare	Urban with Significant Rural	27	24	3	10.49	89.51
North Somerset	Urban with Significant Rural	48	48	5	15.56	82.87

Cornwall

In Cornwall, all 6 constituencies are rural and rank in the worst 30% on the Constituency/Deprivation Index, with an average of 57.3% 5G not-spots. 50% of Cornwall's constituencies rank in the worst 10% on the index.

Constituency	Rural/ Urban group	Coverage / Deprivation index percentile (1 is worst)	Poor coverage percentile (1 is worst)	Deprivation quintile (1 is lowest)	5G Not-spots (%)	5G partial not-spots (%)
North Cornwall	Predominantly Rural	3	2	2	75.84	24.16
St Ives	Predominantly Rural	5	4	2	68.21	31.79
South East Cornwall	Predominantly Rural	10	9	2	58.97	41.02
St Austell and Newquay	Urban with Significant Rural	14	11	2	20.41	79.59
Truro and Falmouth	Urban with Significant Rural	20	17	3	49.99	50.01
Camborne and Redruth	Urban with Significant Rural	23	18	2	74.64	25.36

Devon

Of Devon's 8 constituencies, 6 are rural. All of these rural constituencies are in the worst 30% of the Index, and between them 46.3% of premises in the area are in a 5G total not-spot.

Constituency	Rural/ Urban group	Coverage / Deprivation index percentile (1 is worst)	Poor coverage percentile (1 is worst)	Deprivation quintile (1 is lowest)	5G Not-spots (%)	5G partial not-spots (%)
Torridge and West Devon	Predominantly Rural	3	3	2	66.9	33.1
Central Devon	Predominantly Rural	4	4	3	57.12	42.88
Totnes	Predominantly Rural	7	6	3	66.12	33.88
North Devon	Predominantly Rural	9	8	3	47.73	52.27
Tiverton and Honiton	Predominantly Rural	12	11	4	26.61	73.39
East Devon	Predominantly Rural	18	20	5	17.81	82.19

Chapter 2. Rural 5G opportunities in practice

Agriculture

The rollout of 5GSA to rural areas will bring significant benefits to the agriculture sector in the UK. British farmers will be able to benefit from the enhanced connectivity, from planting and cultivating their crops through to transporting them to consumers around the world.

The greater bandwidth will enable farmers to make use of new and exciting technologies, and the data that they produce, to boost productivity, reduce waste, and drive growth in rural economies.

5G-enabled sensors can provide huge amounts of data, allowing for constant monitoring of the crops and their environment, making a higher yield and better crop quality a distinct reality.⁴ Whether it be the weather, soil quality, or the health of the crops themselves, 5G Internet of Things (IoT) technologies provide the necessary information for farmers to make informed decisions, like when to water their crops, or where to place fertiliser, and when pesticides are required.

On a testbed farm, these sensors helped the farm to reduce its chemical usage by 30%, and improve efficiency by 15%. Similarly, a 5G connected weather station on the farm, with a 92% prediction accuracy, helped farmers plan irrigation schedules, leading to an approximately 30% fall in the farm's water consumption.⁵

When this extensive data is collated in one place, the opportunities for farmers are hugely promising. A farm in South Africa which uses Vodafone's MyFarmWeb app has seen farming yields increase by up to 20% by collecting data in real-time from virtually every machine on the farm.⁶

5G's benefits do not end when the crops are harvested, it also has a role to play in the transportation of produce. Vodafone has partnered with Hugh Lowe Farms, the exclusive strawberry supplier for Wimbledon, to help the farm grow and transport the more than 30 tonnes of strawberries needed at the event. Vodafone's tracking device provides detailed information about the temperature and vibrations in transit, to ensure that the strawberries arrive efficiently and in optimal condition.⁷



Health

5G enabled IoT technology has the potential to unlock transformative health benefits for rural areas, enabling time and cost saving efficiencies for local communities. Improved connectivity facilitated by reliable and fast 5GSA infrastructure offers the ability to both pre-empt and react to health emergencies, in often remote and hard to reach areas, in situations where every second counts. This is particularly important when access to healthcare determines the quality of patient outcomes in 15%-to-25% of cases.⁸

Vodafone research on the impact of 5G in healthcare has found the cost-saving benefits of 5G to be significant. A testbed in Liverpool which utilised 5G to carry out virtual consultations and remote monitoring of patients showed that, if implemented nationwide, savings for health and social care services could total almost £1bn per year and reduce council spending on social care by as much as 5%. Given that these savings are only accessible to councils and health and social care trusts in areas with 5G, many rural areas stand to miss out without the rollout of 5GSA.

Highly advanced technology such as drones can help to address some of the day-to-day geographical challenges in remote regions. Vodafone's "Skyport"⁹ drone programme which has been trialled in remote regions of Scotland offers multiple benefits to local communities. Through utilising cutting-edge mobile infrastructure the initiative has helped rural hospitals in Argyll and Bute, where both the time and cost required to deliver medical supplies have been cut significantly as a result of deploying such technology.⁹ Indeed, supplies which typically take as much as 36 hours to be delivered can now be accessible in just 15 minutes with unmanned aircrafts.¹⁰ The Skyport programme was also particularly effective during the Covid-19 pandemic, enabling the expedited delivery of time sensitive Covid-19 tests.¹¹ Other vital resources such as nutritional packages for babies born prematurely,¹² as well as supplies for chronic conditions such as diabetes can be delivered in a timely manner at short notice.¹³ Indeed, the world's first "diabetes drone" delivering insulin to rural communities was tracked using Vodafone's IoT network enabled technology - ensuring the safety and security of the craft and easing the minds of both healthcare professionals and communities.¹⁴ The NHS has even delivered chemo via remote drone trials on the Isle of Wight, cutting the delivery times from four hours to thirty minutes and providing patients with truly transformative access to treatment as a result of such technology.¹⁵

Drones can also be useful for emergency services to respond to life threatening circumstances, providing vital information and oversight. Indeed, 86% of the public support the usage of drones for emergency responses which could pose a threat to life,¹⁶ such as fires or severe traffic collisions.¹⁷ In rural regions which are often hard to observe or reach in limited time drones could provide vital information to first responders and care teams. The permanent benefits of such programmes are within reach if investment in 5G infrastructure in remote areas can be secured.

Improved digital connectivity is also essential in our rural communities, in areas where the impact of personal isolation can be particularly pronounced. For those patients who struggle to make it to a hospital appointment or GP surgery as a result of a combination of illness and or geographic constraints and wider commitments, 5G-enabled telemedicine solutions provide significant benefits. For instance, NHS Highland has introduced "Near Me", enabling pre-arranged online appointments to take place utilising internet enabled devices.¹⁸ Research commissioned by Vodafone has shown that 57% of the public are comfortable attending online consultations post-pandemic,¹⁹ and by expanding the usage of 5G coverage, telemedicine and remote health monitoring can become the norm, even in rural areas.²⁰

Beyond traditional consultations virtual conferencing technology provides many wider benefits. For instance, by tackling loneliness, the negative effects of which cost £3.9bn every year amongst the over 50s.²¹ Improved wireless infrastructure such as standalone 5G is required to ensure that everyone can access such technology.

The effect of loneliness and isolation can also have a particularly large impact upon an individual's mental health. Indeed, a recent report published by the Defra committee found that "the isolation inherent in rural living represents a significant challenge to the mental health of adults, children, and young people living in rural areas."²² Following the Covid-19 pandemic there has been a move towards many people receiving mental health support online - improving both access and convenience.²³ However, the transition towards an online first approach runs the risk that those in not-spots may fall

through the cracks. Indeed, the Nuffield Trust have asserted that whilst some rural mental health challenges can be addressed through remote care, “rural areas are also more likely to be digitally excluded”.²⁴ As such, the need to invest in improved access to bridge the rural digital divide is essential, to address the specific pressures on mental health and wellbeing in rural areas.

The need for improved virtual capabilities is also particularly pronounced in rural areas owing to the strain on local resources. For instance, whilst the NHS confederation’s plan to utilise virtual wards aims to alleviate financial pressures and workforce limitations nationally,²⁵ such difficulties are most pronounced in rural areas which suffer from staffing shortages and challenges relative to urban centres.²⁶ Moreover, the very factors which render remote technologies such as virtual wards particularly utile in rural areas also undermine the ability to provide such services, owing to the geographical challenges of connectivity.²⁷ Vodafone’s commitment to bring 5GSA to every hospital by 2030 will enable the hospital 2.0 model to be unleashed across all areas of the UK, including in our rural communities.

Healthcare workers working in remote regions also face many of the same digital challenges as their patients. For many social care workers their difficult jobs are complicated by a lack of access to critical information, communication and resources. Vodafone’s Smart Hub gives remote workers the ability to obtain crucial care plans, medical records and real-time information from hospitals and NHS providers on the go. In partnership with Orbis Protect, Vodafone’s Lone Worker Protection helps 25,000 employees to maximise their productivity in a secure and connected environment.²⁸ Similarly, 5G enabled ambulances favoured by four out of five of the public would help to provide potentially life saving real time data to care teams,²⁹ information which is even more valuable in a remote setting, given the large distances which rural ambulances are often required to travel.³⁰



Education

Historically, schooling has predominantly existed within the parameters of the school walls, with teachers, textbooks, workbooks, and exams defining most children's experience of school. The rapid transition from this traditional understanding of education to one adapting to groundbreaking technological advancements, in part due to the Covid-19 pandemic, has brought significant challenges but also huge opportunities.

In rural areas, virtual classrooms could enable pupils to undertake specialist qualifications and therefore increase the number of opportunities available to them, without having to travel long distances. Similarly, bespoke distance learning opportunities, from early years right through to adult learners, could be made available for people right across the UK.

Vodafone's partnership with Coventry University has begun to uncover some of the possibilities which 5GSA provides. Students at the University can access online lecturers seamlessly from any connected device. Bespoke, subject-specific opportunities have been explored in healthcare education, with students enjoying real-time Augmented Reality and Virtual Reality tours of the human body.

It is not only essential that teachers and students alike have a minimum level of connectivity in order to take advantage of the above, but that they have sufficient connectivity to be able to learn what are now essential digital skills. Digital literacy is now becoming so essential that it needs to be on a similar platform to reading and writing, so students know how to carry out everyday tasks, something they cannot learn without a reliable connection.

Research by the ONS has demonstrated clear correlation between a lack of regional connectivity and poor digital literacy.³¹ As such, the rural divide not only compromises the current ability for those in remote areas to access online services, but it simultaneously undermines their capacity to gain digital skills widening the divide yet further.

Crucially, all of the benefits of this digital era of education can not be enjoyed by students left without connectivity. Learners in not-spots will not learn the digital skills they need for the future, or be able to access the same quality of education as their peers. Vodafone has committed, if its proposed merger with Three goes ahead, to rolling out 5G to every school in the country by 2030.

The transition of education into the online world presents an opportunity for disadvantaged students to access the same materials and information as other students, helping to bridge the divide. The alternative, if a lack of connectivity prevents them from doing so, is that this divide is only further widened.

Chapter 3. Boosting rural 5G coverage

Investment in infrastructure is key to boosting 5G coverage in rural Britain and across the UK. Vodafone UK and Three UK are seeking to combine their businesses, to create a stronger network that will help close the rural digital divide. The combined business will invest over £6bn in the first five years, and more than £11bn for the overall ten-year plan, to create the UK's biggest 5G network with almost 26,000 sites.

Vodafone UK's merger with Three UK will create a network that will reach more than 99% population coverage with a 5G standalone network by 2034, and over 95% population coverage by 2030, in full support of the Government's Wireless Infrastructure Strategy ambitions for nationwide coverage of 5G standalone in all populated areas by 2030.

The combined business will close the rural digital divide by delivering over 95% 4G geographic coverage by 2027, exceeding the Government's Shared Rural Network target of 90% by each mobile operator by 2027. That means taking 4G to every corner of the UK, with 96.6%, 98.4%, 89.3% and 93% geographic coverage for England, Northern Ireland, Scotland and Wales respectively by 2027. We will then go further by upgrading our network to have over 95% 5G standalone geographic coverage by 2034, which will also be available to 4G customers. This will ensure rural communities across all nations of the UK will be part of the UK's digital transformation at home, at work and on the move.



Appendix

Methodology

Rural / urban

Rural / urban classifications either directly use or are based on the ONS definitions. England data uses [Rural Urban Classification \(2011\) of Westminster Parliamentary Constituencies in England](#), for Scotland and Wales we follow thresholds set out in [ONS' Local Authority Urban Rural user guide](#).

Throughout this report, reference to rural constituencies refers to constituencies which are categorised as either 'Predominantly Rural' or 'Urban with Significant Rural'.

Coverage

In line with the House of Commons Library briefing note, we provide two key sets of figures:

- Not-spots: areas where there is no mobile coverage available from any operator.
- Partial not-spots: areas where there is mobile coverage from one or more, but not all operators.

As such, this provides context both for where coverage overall could be increased and for where competition and choice could be increased.

We have based our assessment of coverage on coverage outside of premises.

Results are split by 4G and 5G coverage and are sourced from the Ofcom's Connected Nations 2023 data.

Deprivation

Measures of deprivation are based on separate Indices of Multiple Deprivation for England, Scotland and Wales respectively compiled into one dataset by Consumer Data Research Centre.

Parliamentary Constituency ranking

To understand the scale of the problem of connectivity and deprivation, and relate that to rurality, we have taken a three step process:

1. We have created a composite connectivity index, which combines connectivity scores for both 4G and 5G into one measure.
2. We have weighted this by standardised deprivation ranks.
3. We have split this into a percentile distribution.

Poor mobile coverage: is based on the composite connectivity index created above, and defined to be those constituencies in the bottom 20% of connectivity score.

National and County analysis

Westminster parliamentary constituency boundaries do not fit perfectly inside county/unitary authorities and some constituencies have more than one 'parent' county/unitary authority. We have not apportioned our results to account for this and have instead allocated constituencies to one parent authority according to where the majority of postcodes are located.

Geographic focus

This version of the data focuses on Great Britain.

Populations

Are taken from Census 2021.

Constituency	Rural/Urban group	Coverage / Deprivation index percentile (1 is worst)	Poor coverage percentile (1 is worst)	Population 2021	Deprivation quintile (1 is lowest)	4G not-spots	4G partial not-spots	4G All operators	5G not-spots	5G partial not-spots	5G All operators
Na H-eileanan An Iar	Predominantly Rural	1	1	26640	3	1.22	46.47	52.31	100	0	0
Orkney and Shetland	Predominantly Rural	1	1	45480	4	0.27	44.65	55.08	100	0	0
Ynys Môn	Predominantly Rural	1	1	68880	3	0.01	32.5	67.49	78.64	21.36	0
Dwyfor Meirionnydd	Predominantly Rural	1	1	57527	4	2.02	24.64	73.34	75.29	24.71	0
Montgomeryshire	Predominantly Rural	1	1	63747	4	3.5	19.26	77.24	70.99	29.01	0
Wells	Predominantly Rural	1	1	107530	3	0.06	22.73	77.21	28.34	71.66	0
Argyll and Bute	Predominantly Rural	1	1	86220	3	0.61	21.55	77.84	72.32	27.68	0
Cynon Valley	Urban with Significant Rural	2	2	70623	1	0.09	19.32	80.59	60.55	39.45	0
Ceredigion	Predominantly Rural	2	2	71473	3	2.3	15.65	82.05	56.52	43.48	0
North Norfolk	Predominantly Rural	2	2	85618	2	0.05	17.75	82.2	79.34	20.66	0
West Aberdeenshire and Kincardine	Predominantly Rural	2	3	97792	5	0.23	13.45	86.32	58.08	41.92	0
Penrith and The Border	Predominantly Rural	2	2	84424	3	1.37	13.95	84.68	51.11	48.89	0
Ludlow	Predominantly Rural	2	2	85370	3	1.12	13.44	85.44	47.37	52.63	0
Westmorland and Lonsdale	Predominantly Rural	2	3	84420	5	0.59	12.41	87	27.9	72.1	0
Carmarthen East and Dinefwr	Predominantly Rural	3	2	73642	3	0.96	13.28	85.76	64.44	35.56	0
North Cornwall	Predominantly Rural	3	2	93023	2	0.55	13.94	85.51	75.84	24.16	0
Brecon and Radnorshire	Predominantly Rural	3	3	69421	5	2.66	8.8	88.54	70.34	29.66	0
Suffolk Coastal	Predominantly Rural	3	3	103003	4	0.02	11.69	88.29	61.85	38.15	0
South Norfolk	Predominantly Rural	3	4	112204	4	0	11.29	88.71	67.57	32.43	0
Torrige and West Devon	Predominantly Rural	3	3	102567	2	0.47	11.49	88.04	66.9	33.1	0
Caithness, Sutherland and Easter Ross	Predominantly Rural	3	3	60747	2	0.46	11.48	88.06	80.12	19.88	0
The Cotswolds	Predominantly Rural	4	5	104039	5	0.14	9.65	90.21	59.05	40.95	0
Central Devon	Predominantly Rural	4	4	95461	3	1.28	9.89	88.83	57.12	42.88	0
Berwick-upon-Tweed	Predominantly Rural	4	3	75538	3	1.03	10.4	88.57	55.21	44.79	0
Preseli Pembrokeshire	Predominantly Rural	4	4	77636	3	0.31	10.47	89.22	62.24	37.76	0

Constituency	Rural/Urban group	Coverage / Deprivation index percentile (1 is worst)	Poor coverage percentile (1 is worst)	Population 2021	Deprivation quintile (1 is lowest)	4G not-spots	4G partial not-spots	4G All operators	5G not-spots	5G partial not-spots	5G All operators
Clwyd West	Urban with Significant Rural	4	4	74202	4	0.48	9.99	89.53	62.34	37.66	0
Skipton and Ripon	Predominantly Rural	4	5	101035	4	0.88	9.19	89.93	26.07	73.91	0.02
North Dorset	Predominantly Rural	4	4	98234	4	0.35	9.53	90.12	31.15	68.85	0
St Ives	Predominantly Rural	5	4	85309	2	0.24	10.91	88.85	68.21	31.79	0
Forest of Dean	Predominantly Rural	5	4	91560	3	0.15	10.02	89.83	18.66	81.34	0
Brigg and Goole	Predominantly Rural	5	5	87666	3	0	9.77	90.23	27.11	72.89	0
Carmarthen West and South Pembrokeshire	Predominantly Rural	5	5	77622	3	0.92	8.88	90.2	49.23	50.77	0
Moray	Predominantly Rural	5	5	96410	4	0.25	9.03	90.72	66.59	33.41	0
Monmouth	Urban with Significant Rural	5	7	85042	5	0.86	7.1	92.04	25.51	74.49	0
Thirsk and Malton	Predominantly Rural	5	6	101707	4	1.39	7.84	90.77	50.6	49.4	0
Banff and Buchan	Predominantly Rural	6	5	91441	3	0.05	9.27	90.68	91.95	8.05	0
North Herefordshire	Predominantly Rural	6	6	89492	3	0.31	8.84	90.85	37.33	62.67	0
Somerton and Frome	Predominantly Rural	6	6	111399	4	0.13	8.66	91.21	24.37	75.63	0
Richmond (Yorks)	Predominantly Rural	6	7	105022	5	1.22	6.64	92.14	58.19	41.81	0
Broadland	Predominantly Rural	6	6	100063	4	0.02	8.04	91.94	57.11	42.89	0
Bishop Auckland	Predominantly Rural	6	5	89911	1	0.29	9.06	90.65	22.21	77.79	0
West Worcestershire	Predominantly Rural	6	7	98222	4	0.07	7.92	92.01	20.51	79.49	0
Wantage	Urban with Significant Rural	7	8	131349	5	0	6.11	93.89	43.3	56.7	0
Totnes	Predominantly Rural	7	6	88070	3	0.4	7.98	91.62	66.12	33.88	0
Copeland	Predominantly Rural	7	6	76514	2	1.23	7.31	91.46	55.31	44.69	0
Dumfriesshire, Clydesdale and Tweeddale	Predominantly Rural	7	7	86667	4	0.59	7.11	92.3	74.31	25.69	0
Clwyd South	Predominantly Rural	7	7	70771	3	0.84	6.85	92.31	77.55	22.45	0
Bridgwater and West Somerset	Predominantly Rural	7	6	116289	2	0.95	7.26	91.79	25.24	74.76	0
North Shropshire	Predominantly Rural	7	7	110157	3	0.06	7.76	92.18	41.93	58.07	0
Harrogate and Knaresborough	Predominantly Urban	8	9	104740	5	0	5.96	94.04	32.08	67.92	0
Dumfries and Galloway	Predominantly Rural	8	7	95478	2	0.17	7.6	92.23	44.13	55.87	0

Constituency	Rural/Urban group	Coverage / Deprivation index percentile (1 is worst)	Poor coverage percentile (1 is worst)	Population 2021	Deprivation quintile (1 is lowest)	4G not-spots	4G partial not-spots	4G All operators	5G not-spots	5G partial not-spots	5G All operators
South Holland and The Deepings	Predominantly Rural	8	8	109481	3	0.05	7.23	92.72	40.6	59.4	0
Stirling	Predominantly Rural	8	8	93470	5	0.24	6.22	93.54	39.59	60.41	0
Tunbridge Wells	Urban with Significant Rural	8	10	105423	5	0.03	5.34	94.63	13.52	86.48	0
Delyn	Urban with Significant Rural	8	9	70599	5	0.01	5.9	94.09	89.66	10.34	0
Central Suffolk and North Ipswich	Predominantly Rural	8	9	103125	4	0.02	5.99	93.99	55.08	44.92	0
West Dorset	Predominantly Rural	9	8	100999	4	0.09	6.35	93.56	66.37	33.63	0
Mid Norfolk	Predominantly Rural	9	8	111376	3	0.06	6.46	93.48	47.14	52.86	0
Buckingham	Predominantly Rural	9	12	111256	5	0	6.62	93.38	47.64	52.25	0.11
Hereford and South Herefordshire	Urban with Significant Rural	9	8	97544	3	0.36	6.25	93.39	16.83	83.17	0
North Devon	Predominantly Rural	9	8	98609	3	0.42	6.19	93.39	47.73	52.27	0
Hexham	Predominantly Rural	9	10	76400	5	0.62	4.65	94.73	30.3	69.7	0
Witney	Predominantly Rural	9	13	114238	5	0	3.94	96.06	53.42	46.58	0
Devizes	Predominantly Rural	10	10	103813	4	0.06	5.21	94.73	57.4	42.6	0
Gainsborough	Predominantly Rural	10	9	97739	3	0.06	5.96	93.98	45.78	54.22	0
South East Cornwall	Predominantly Rural	10	9	91350	2	0.17	6.15	93.68	58.97	41.02	0.01
Staffordshire Moorlands	Urban with Significant Rural	10	10	76612	4	0.53	4.68	94.79	11.75	88.25	0
Maldon	Predominantly Rural	10	11	94314	4	0	4.72	95.28	34.26	65.74	0
Berwickshire, Roxburgh and Selkirk	Predominantly Rural	10	10	95249	3	0.74	4.87	94.39	53.43	46.57	0
Alyn and Deeside	Urban with Significant Rural	10	13	84370	5	0.01	4.04	95.95	53	47	0
Arfon	Predominantly Rural	11	10	59871	4	0.41	4.93	94.66	80.38	19.62	0
Saffron Walden	Predominantly Rural	11	13	117847	5	0.05	3.8	96.15	45.14	54.86	0
Pontypridd	Predominantly Urban	11	10	81509	4	0	5.08	94.92	20.08	79.92	0
Louth and Horncastle	Predominantly Rural	11	9	100718	2	0.02	5.88	94.1	46.52	53.48	0
South West Surrey	Predominantly Urban	11	18	108291	5	0.24	2.29	97.47	22.46	77.54	0
Neath	Urban with Significant Rural	11	9	72914	2	0.14	5.53	94.33	18.18	81.82	0

Constituency	Rural/Urban group	Coverage / Deprivation index percentile (1 is worst)	Poor coverage percentile (1 is worst)	Population 2021	Deprivation quintile (1 is lowest)	4G not-spots	4G partial not-spots	4G All operators	5G not-spots	5G partial not-spots	5G All operators
Salisbury	Urban with Significant Rural	11	12	100272	4	0.04	4.34	95.62	31.97	68.03	0
Ribble Valley	Urban with Significant Rural	12	13	103059	5	0.28	3.77	95.95	7.17	92.83	0
North West Cambridgeshire	Predominantly Rural	12	11	142816	4	0	4.98	95.02	17.35	82.65	0
North Wiltshire	Predominantly Rural	12	13	99884	5	0.04	3.88	96.08	33.95	66.05	0
Witham	Predominantly Rural	12	13	96431	4	0	4.13	95.87	25.86	74.14	0
Tiverton and Honiton	Predominantly Rural	12	11	105716	4	0.17	4.35	95.48	26.61	73.39	0
Perth and North Perthshire	Predominantly Rural	12	12	98253	4	0.32	4.08	95.6	33.38	66.62	0
Faversham and Mid Kent	Urban with Significant Rural	12	11	101498	3	0.03	4.64	95.33	15.89	84.11	0
South West Wiltshire	Urban with Significant Rural	13	12	104728	4	0.05	4.36	95.59	16.79	83.21	0
Wealden	Urban with Significant Rural	13	15	108870	5	0.07	3.45	96.48	68.2	31.8	0
North East Hertfordshire	Urban with Significant Rural	13	15	102791	5	0	3.43	96.57	25.19	74.81	0
South Suffolk	Predominantly Rural	13	13	96570	4	0.01	3.98	96.01	55.25	44.75	0
Aberconwy	Predominantly Rural	13	14	55870	5	1.23	2.4	96.37	63.63	36.37	0
Chichester	Urban with Significant Rural	13	15	114424	4	0.07	3.55	96.38	22.96	77.04	0
South Cambridgeshire	Predominantly Rural	13	22	124507	5	0	1.98	98.02	26.52	73.47	0.01
St Austell and Newquay	Urban with Significant Rural	14	11	107729	2	0.07	4.63	95.3	20.41	79.59	0
Tonbridge and Malling	Predominantly Rural	14	15	107403	4	0.01	3.18	96.81	56.29	43.71	0
Stroud	Predominantly Urban	14	17	107893	5	0.06	2.62	97.32	7.07	92.93	0
North Ayrshire and Arran	Urban with Significant Rural	14	11	93068	2	0.04	4.62	95.34	38.03	61.97	0
Ochil and South Perthshire	Predominantly Rural	14	14	107097	4	0.11	3.67	96.22	47.53	52.47	0
Maidstone and The Weald	Urban with Significant Rural	14	15	113168	4	0	3.6	96.4	1.58	98.42	0
Newbury	Urban with Significant Rural	14	18	113433	5	0.01	2.38	97.61	27.54	72.46	0
Selby and Ainsty	Predominantly Rural	15	16	105807	5	0	2.84	97.16	38.67	61.33	0
Mid Sussex	Predominantly Urban	15	23	115650	5	0.01	1.31	98.68	31.19	68.81	0
Scarborough and Whitby	Urban with Significant Rural	15	11	97188	2	0.28	4.21	95.51	13.11	86.89	0
Braintree	Urban with Significant Rural	15	15	103261	4	0.01	3.43	96.56	19.34	80.66	0
Arundel and South Downs	Predominantly Rural	15	17	104293	5	0.02	2.57	97.41	42.29	57.71	0

Constituency	Rural/Urban group	Coverage / Deprivation index percentile (1 is worst)	Poor coverage percentile (1 is worst)	Population 2021	Deprivation quintile (1 is lowest)	4G not-spots	4G partial not-spots	4G All operators	5G not-spots	5G partial not-spots	5G All operators
Aylesbury	Urban with Significant Rural	15	18	125092	5	0.01	2.5	97.49	10.35	89.65	0
Bury St Edmunds	Urban with Significant Rural	15	16	117444	4	0	3.08	96.92	25.62	74.38	0
Waveney	Predominantly Urban	16	12	103454	2	0	4.35	95.65	29.82	70.18	0
Sleaford and North Hykeham	Predominantly Rural	16	17	120778	5	0	2.62	97.38	42.26	57.74	0
North West Hampshire	Predominantly Rural	16	19	114535	5	0.01	2.31	97.68	29.46	70.54	0
Meon Valley	Predominantly Rural	16	21	98191	5	0.19	1.8	98.01	22.66	77.34	0
Barrow and Furness	Urban with Significant Rural	16	12	87436	2	0.17	4.04	95.79	18.17	81.83	0
West Suffolk	Urban with Significant Rural	16	14	122261	3	0	3.68	96.32	38.06	61.94	0
Banbury	Urban with Significant Rural	16	16	136459	4	0	3.14	96.86	15.04	84.96	0
Merthyr Tydfil and Rhymney	Urban with Significant Rural	17	12	74471	1	0.02	4.45	95.53	8.73	91.27	0
Macclesfield	Predominantly Urban	17	18	95568	5	0.23	2.35	97.42	8.44	91.56	0
Lichfield	Urban with Significant Rural	17	19	98619	5	0	2.37	97.63	13.97	86.03	0
South Dorset	Urban with Significant Rural	17	14	93747	3	0.02	3.83	96.15	31.09	68.91	0
South East Cambridgeshire	Predominantly Rural	17	21	118922	5	0	2.23	97.77	42.22	57.76	0.02
North East Somerset	Predominantly Rural	17	20	98366	5	0.28	1.8	97.92	10.23	89.77	0
East Hampshire	Predominantly Rural	17	21	103053	5	0.02	1.96	98.02	41.9	58.1	0
East Devon	Predominantly Rural	18	20	111916	5	0.04	2.05	97.91	17.81	82.19	0
Horsham	Urban with Significant Rural	18	24	117994	5	0	1.2	98.8	40.6	59.4	0
South West Norfolk	Predominantly Rural	18	14	110437	2	0	3.8	96.2	40.82	59.18	0
Folkestone and Hythe	Urban with Significant Rural	18	14	115177	2	0.05	3.69	96.26	18.69	81.31	0
New Forest West	Urban with Significant Rural	18	21	85009	5	0.02	2.02	97.96	30.74	69.26	0
North East Cambridgeshire	Urban with Significant Rural	18	14	120843	2	0	3.63	96.37	25.62	74.38	0
North East Bedfordshire	Predominantly Rural	18	23	123887	5	0	1.67	98.33	19.67	80.33	0
Winchester	Urban with Significant Rural	19	28	102279	5	0	0.51	99.49	18.69	81.31	0
Stratford-on-avon	Predominantly Rural	19	21	97231	5	0	4.64	95.36	19.06	80.81	0.13
East Yorkshire	Predominantly Rural	19	16	104358	3	0.01	2.89	97.1	31.91	68.09	0
Newton Abbot	Predominantly Urban	19	17	93518	4	0.07	2.55	97.38	32.61	67.39	0

Constituency	Rural/Urban group	Coverage / Deprivation index percentile (1 is worst)	Poor coverage percentile (1 is worst)	Population 2021	Deprivation quintile (1 is lowest)	4G not-spots	4G partial not-spots	4G All operators	5G not-spots	5G partial not-spots	5G All operators
Workington	Predominantly Rural	19	15	78837	2	0.05	3.24	96.71	23.18	76.82	0
Angus	Urban with Significant Rural	19	16	85388	3	0.56	2.56	96.88	54.35	45.65	0
Surrey Heath	Predominantly Urban	19	31	110903	5	0	0.28	99.72	21.87	78.13	0
Taunton Deane	Urban with Significant Rural	20	18	122506	3	0.06	2.39	97.55	7.76	92.24	0
Newark	Predominantly Rural	20	20	104557	4	0	2.12	97.88	35.41	64.59	0
Eddisbury	Predominantly Rural	20	19	98559	4	0.13	2.17	97.7	46.47	53.53	0
Sittingbourne and Sheppey	Urban with Significant Rural	20	16	122682	2	0	3.13	96.87	6.64	93.36	0
High Peak	Urban with Significant Rural	20	20	90928	4	0.1	1.97	97.93	27.27	72.73	0
Truro and Falmouth	Urban with Significant Rural	20	17	99504	3	0.16	2.47	97.37	49.99	50.01	0
Canterbury	Predominantly Urban	20	20	113392	4	0.01	2.06	97.93	11.67	88.33	0
North West Norfolk	Predominantly Rural	21	16	98682	2	0	2.93	97.07	45.67	54.33	0
Bexhill and Battle	Predominantly Rural	21	19	104672	4	0.01	2.2	97.79	27.18	72.82	0
Ross, Skye and Lochaber	Predominantly Rural	21	19	70432	4	1.48	22.93	75.59	60.37	38.6	1.03
Thornbury and Yate	Urban with Significant Rural	21	26	92818	5	0	0.74	99.26	1.95	98.05	0
Rayleigh and Wickford	Predominantly Urban	21	29	100083	5	0	0.42	99.58	4.17	95.83	0
Corby	Predominantly Rural	21	19	129465	3	0.01	2.37	97.62	18.58	81.42	0
Fylde	Predominantly Urban	21	22	88529	4	0	1.76	98.24	28.19	71.81	0
Morecambe and Lunesdale	Urban with Significant Rural	22	17	89305	2	0.03	2.59	97.38	3.59	96.41	0
Wyre and Preston North	Urban with Significant Rural	22	26	97000	5	0.12	0.72	99.16	20.33	79.67	0
Fareham	Predominantly Urban	22	37	100194	5	0	0.01	99.99	2.48	97.52	0
Chesham and Amersham	Urban with Significant Rural	22	41	96685	5	0	0.81	99.19	38.41	61.51	0.08
Wrexham	Predominantly Urban	22	22	71825	4	0	1.76	98.24	45.31	54.69	0
Linlithgow and East Falkirk	Predominantly Urban	22	20	120464	3	0.02	2.16	97.82	42.65	57.35	0
Shrewsbury and Atcham	Urban with Significant Rural	22	22	109693	4	0.08	1.6	98.32	11.7	88.3	0
Aberavon	Predominantly Urban	23	17	69369	1	0	2.82	97.18	32.6	67.4	0
Wyre Forest	Predominantly Urban	23	20	101606	3	0.02	2.16	97.82	7.22	92.78	0
Grantham and Stamford	Urban with Significant Rural	23	24	112786	4	0	1.21	98.79	17.57	82.43	0

Constituency	Rural/Urban group	Coverage / Deprivation index percentile (1 is worst)	Poor coverage percentile (1 is worst)	Population 2021	Deprivation quintile (1 is lowest)	4G not-spots	4G partial not-spots	4G All operators	5G not-spots	5G partial not-spots	5G All operators
Camborne and Redruth	Urban with Significant Rural	23	18	95439	2	0.34	2.21	97.45	74.64	25.36	0
Wycombe	Predominantly Urban	23	25	115028	4	0.12	0.79	99.09	13.69	86.31	0
Tatton	Urban with Significant Rural	23	30	89252	5	0	0.34	99.66	10.25	89.75	0
Ayr, Carrick and Cumnock	Predominantly Rural	23	18	91402	2	0.44	2.04	97.52	26.42	73.58	0
The Wrekin	Urban with Significant Rural	24	22	102017	3	0	1.7	98.3	64.93	35.07	0
Llanelli	Urban with Significant Rural	24	19	82362	2	0	2.33	97.67	19.02	80.98	0
Bracknell	Predominantly Urban	24	33	113961	5	0	0.18	99.82	19.48	80.52	0
Ashford	Urban with Significant Rural	24	21	127322	3	0.01	1.78	98.21	22.82	77.18	0
Harwich and North Essex	Predominantly Rural	24	23	95790	3	0	1.58	98.42	45.34	54.66	0
Mid Worcestershire	Urban with Significant Rural	24	23	107748	4	0	1.43	98.57	15.35	84.65	0
Yeovil	Predominantly Rural	24	22	113830	3	0.02	1.67	98.31	9.32	90.68	0
New Forest East	Predominantly Urban	25	26	90780	4	0.04	0.76	99.2	29.76	70.24	0
North East Hampshire	Urban with Significant Rural	25	42	105906	5	0	1.33	98.67	64.24	35.62	0.14
Huntingdon	Urban with Significant Rural	25	29	122542	5	0	0.42	99.58	3.99	96.01	0
Bridgend	Predominantly Urban	25	26	85758	4	0	0.76	99.24	21.42	78.58	0
Bath	Predominantly Urban	25	34	95048	5	0	0.11	99.89	1.86	98.14	0
Chippenham	Urban with Significant Rural	25	31	101638	5	0	0.27	99.73	23.98	76.02	0
South Ribble	Urban with Significant Rural	25	28	99256	4	0	0.48	99.52	5.1	94.9	0
Congleton	Predominantly Urban	26	36	104039	5	0	0.06	99.94	10.81	89.19	0
Vale of Clwyd	Urban with Significant Rural	26	22	72999	2	0.03	1.67	98.3	84.99	15.01	0
Lewes	Urban with Significant Rural	26	26	90935	4	0.03	0.71	99.26	29.83	70.17	0
Chelmsford	Predominantly Urban	26	38	112872	5	0	0	100	0.01	99.99	0
West Lancashire	Urban with Significant Rural	26	24	100433	3	0	1.15	98.85	7.77	92.23	0
Clacton	Predominantly Urban	26	21	90966	1	0	1.96	98.04	14.55	85.45	0
Hertford and Stortford	Predominantly Urban	26	41	115086	5	0	0.95	99.05	34.55	65.34	0.11
Tamworth	Predominantly Urban	27	24	97947	3	0	1.58	98.42	2.42	97.56	0.02
Stafford	Urban with Significant Rural	27	32	99247	4	0	0.27	99.73	1.24	98.76	0

Constituency	Rural/Urban group	Coverage / Deprivation index percentile (1 is worst)	Poor coverage percentile (1 is worst)	Population 2021	Deprivation quintile (1 is lowest)	4G not-spots	4G partial not-spots	4G All operators	5G not-spots	5G partial not-spots	5G All operators
Weston-super-mare	Urban with Significant Rural	27	24	113559	3	0	1.2	98.8	10.49	89.51	0
Bosworth	Urban with Significant Rural	27	32	106827	4	0	1.12	98.88	17.85	82.11	0.04
Kettering	Predominantly Urban	27	26	105825	4	0	0.81	99.19	1.27	98.73	0
Isle of Wight	Urban with Significant Rural	27	23	140462	2	0	1.47	98.53	9.16	90.84	0
North Thanet	Predominantly Urban	27	23	99342	2	0	1.45	98.55	11.1	88.9	0
North West Durham	Predominantly Rural	28	23	93896	2	0.01	1.34	98.65	54.5	45.5	0
Warwick and Leamington	Predominantly Urban	28	39	106008	4	0	0	100	1.49	98.51	0
Redditch	Predominantly Urban	28	25	93053	3	0.01	0.91	99.08	2.12	97.88	0
Aldershot	Predominantly Urban	28	36	111274	4	0	0.05	99.95	9.6	90.4	0
City of Chester	Predominantly Urban	28	29	100272	4	0	0.41	99.59	12.37	87.63	0
Dover	Urban with Significant Rural	28	25	102066	2	0.01	0.99	99	25.25	74.75	0
Pendle	Predominantly Urban	28	24	95757	1	0.1	1.15	98.75	23.7	76.3	0
Nuneaton	Predominantly Urban	29	25	99485	3	0	1.32	98.68	10.18	89.8	0.02
Christchurch	Predominantly Urban	29	41	87805	5	0	0.17	99.83	36.14	63.81	0.05
Bolsover	Predominantly Rural	29	25	99979	2	0	1.47	98.53	30.47	69.51	0.02
Wirral West	Predominantly Urban	29	39	68918	4	0	0	100	19.41	80.59	0
Bassetlaw	Urban with Significant Rural	29	26	108413	2	0	0.83	99.17	22.2	77.8	0
Castle Point	Predominantly Urban	29	33	89586	4	0	0.18	99.82	3.74	96.26	0
Boston and Skegness	Urban with Significant Rural	29	24	109487	1	0	1.09	98.91	13.84	86.16	0
Weaver Vale	Urban with Significant Rural	30	28	92870	3	0.01	0.46	99.53	10.91	89.09	0
Inverclyde	Predominantly Urban	30	25	76700	1	0	1.08	98.92	15.42	84.58	0
Colchester	Predominantly Urban	30	28	123862	3	0	0.56	99.44	0.08	99.92	0
Henley	Predominantly Rural	30	43	103753	5	0.06	2.34	97.6	55.88	43.91	0.21
Chorley	Predominantly Urban	30	34	105014	4	0	0.11	99.89	4.53	95.47	0
Rugby	Predominantly Urban	30	40	108440	4	0	0.28	99.72	9.73	90.24	0.03
Worthing West	Predominantly Urban	30	40	102051	4	0	0	100	0.32	99.68	0
Stone	Predominantly Rural	31	40	86504	5	0.03	2.86	97.11	15.17	84.66	0.17

Constituency	Rural/Urban group	Coverage / Deprivation index percentile (1 is worst)	Poor coverage percentile (1 is worst)	Population 2021	Deprivation quintile (1 is lowest)	4G not-spots	4G partial not-spots	4G All operators	5G not-spots	5G partial not-spots	5G All operators
Ellesmere Port and Neston	Predominantly Urban	31	30	92173	3	0	0.3	99.7	55.46	44.54	0
Norwich North	Predominantly Urban	31	30	92089	3	0	0.35	99.65	6.6	93.4	0
Crewe and Nantwich	Predominantly Urban	31	35	114159	3	0	0.07	99.93	12.75	87.25	0
Rochester and Strood	Predominantly Urban	31	28	116652	3	0	0.51	99.49	5.14	94.86	0
Burton	Predominantly Urban	31	31	112529	3	0	0.92	99.08	7.21	92.76	0.03
Great Yarmouth	Urban with Significant Rural	31	25	99750	1	0	0.9	99.1	12.96	87.04	0
Exeter	Predominantly Urban	32	38	115228	4	0	0	100	4.52	95.48	0
Kilmarnock and Loudoun	Predominantly Rural	32	27	97218	2	0	0.71	99.29	23.04	76.96	0
Rossendale and Darwen	Predominantly Urban	32	27	99425	2	0	1.33	98.67	25.21	74.76	0.03
Brighton, Hove and Moulton	Predominantly Urban	32	27	93656	2	0	0.69	99.31	16.67	83.33	0
Gosport	Predominantly Urban	32	38	96269	3	0	0	100	1.17	98.83	0
Lanark and Hamilton East	Urban with Significant Rural	32	28	98716	2	0	0.49	99.51	19.95	80.05	0
Cannock Chase	Predominantly Urban	32	30	100518	3	0	0.34	99.66	0.6	99.4	0
Cumbernauld, Kilsyth and Kirkintilloch East	Urban with Significant Rural	33	30	88256	2	0	0.36	99.64	29.03	70.97	0
Amber Valley	Predominantly Urban	33	31	90321	3	0	0.29	99.71	8.38	91.62	0
Hitchin and Harpenden	Urban with Significant Rural	33	43	103654	5	0	0.18	99.82	12.23	87.65	0.12
Carlisle	Predominantly Urban	33	29	88212	3	0	0.4	99.6	6.3	93.7	0
Makerfield	Predominantly Urban	33	32	99690	3	0	0.26	99.74	0.03	99.97	0
Telford	Predominantly Urban	33	27	101915	2	0	0.62	99.38	10.67	89.33	0
Worcester	Predominantly Urban	34	39	103871	3	0	0	100	0.25	99.75	0
Blyth Valley	Predominantly Urban	34	29	85336	2	0	0.61	99.39	1.75	98.24	0.01
Central Ayrshire	Predominantly Urban	34	29	87002	2	0	0.4	99.6	23.62	76.38	0
Stevenage	Predominantly Urban	34	37	99973	3	0	0.02	99.98	5.84	94.16	0
Islwyn	Predominantly Urban	34	31	74366	2	0	0.29	99.71	38.85	61.15	0
Falkirk	Predominantly Urban	34	35	112144	3	0	0.09	99.91	10.57	89.43	0
Chatham and Aylesford	Predominantly Urban	35	30	102566	2	0	0.3	99.7	5.9	94.1	0

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Crawley	Predominantly Urban	35	36	118491	3	0	0.04	99.96	0.84	99.16	0
Blaenau Gwent	Predominantly Urban	35	27	66905	1	0	0.66	99.34	6.01	93.99	0
Airdrie and Shotts	Urban with Significant Rural	35	27	86362	1	0	0.57	99.43	26.64	73.36	0
Rhondda	Predominantly Urban	35	27	68172	1	0	0.64	99.36	7.94	92.06	0
Eastbourne	Predominantly Urban	35	37	109242	3	0	0.03	99.97	0.82	99.18	0
Ogmore	Predominantly Rural	36	28	77077	1	0	0.47	99.53	49.68	50.32	0
Gillingham and Rainham	Predominantly Urban	36	38	102316	3	0	0	100	0.02	99.98	0
Southport	Predominantly Urban	36	36	92980	3	0	0.05	99.95	2.39	97.61	0
Mansfield	Predominantly Urban	36	30	110476	2	0	0.34	99.66	0.83	99.17	0
Bognor Regis and Littlehampton	Predominantly Urban	36	35	110146	3	0	0.07	99.93	2.78	97.22	0
Scunthorpe	Predominantly Urban	36	32	90621	2	0	0.2	99.8	11.95	88.05	0
Hartlepool	Predominantly Urban	37	29	92337	1	0	0.42	99.58	6.21	93.79	0
South Thanet	Predominantly Urban	37	31	99622	2	0	0.27	99.73	5.72	94.28	0
Sedgefield	Predominantly Rural	37	31	85659	2	0	0.3	99.7	41.46	58.54	0
Havant	Predominantly Urban	37	34	95007	2	0	0.11	99.89	13.36	86.64	0
Newcastle-under-lyme	Predominantly Urban	37	40	88688	3	0	0.22	99.78	1.38	98.6	0.02
Lincoln	Predominantly Urban	37	35	117367	2	0	0.1	99.9	3.77	96.23	0
Torfaen	Predominantly Urban	38	32	82637	1	0.02	0.25	99.73	5.69	94.31	0
Leigh	Predominantly Urban	38	35	109120	2	0	0.08	99.92	0	100	0
Bedford	Predominantly Urban	38	38	110604	3	0	0	100	0.06	99.94	0
Wigan	Predominantly Urban	38	34	104890	2	0	0.11	99.89	0.33	99.67	0
Norwich South	Predominantly Urban	38	39	105921	2	0	0	100	10.57	89.43	0
Torbay	Predominantly Urban	38	33	102937	2	0	0.17	99.83	8.82	91.18	0
Caerphilly	Predominantly Urban	39	40	85952	2	0	0.13	99.87	25.85	74.14	0.01
Darlington	Predominantly Urban	39	36	92194	2	0	0.04	99.96	8.74	91.26	0
Burnley	Predominantly Urban	39	32	94647	1	0	0.25	99.75	12.07	87.93	0

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Ipswich	Predominantly Urban	39	39	114821	2	0	0	100	1.6	98.4	0
Ashfield	Predominantly Urban	39	35	104490	2	0	0.06	99.94	1.98	98.02	0
Barnsley East	Predominantly Urban	39	32	94357	1	0	0.2	99.8	0.36	99.64	0
Glenrothes	Predominantly Urban	40	33	88342	1	0	0.14	99.86	11.08	88.92	0
Hastings and Rye	Predominantly Urban	40	33	109294	1	0	0.15	99.85	14.39	85.61	0
Hyndburn	Predominantly Urban	40	34	94023	1	0	0.12	99.88	11.66	88.34	0
Motherwell and Wishaw	Predominantly Urban	40	34	93842	1	0	0.13	99.87	4.17	95.83	0
St Helens North	Predominantly Urban	40	37	100171	2	0	0.04	99.96	0.24	99.76	0
Easington	Predominantly Urban	40	33	81513	1	0	0.18	99.82	20.67	79.33	0
Peterborough	Predominantly Urban	41	36	131148	1	0	0.05	99.95	2.77	97.23	0
Barnsley Central	Predominantly Urban	41	37	90557	1	0	0	100	0.85	99.15	0
Blackpool North and Cleveleys	Predominantly Urban	41	37	82875	1	0	0.01	99.99	0	100	0
Great Grimsby	Predominantly Urban	41	38	86152	1	0	0	100	0	100	0
Gower	Urban with Significant Rural	41	44	78052	5	0.06	2.81	97.13	37	62.72	0.28
Preston	Predominantly Urban	41	39	95944	1	0	0	100	0	100	0
South West Bedfordshire	Predominantly Urban	42	42	114982	4	0	0.19	99.81	21.5	78.42	0.08
City of Durham	Urban with Significant Rural	42	41	99352	3	0	1.63	98.37	30.23	69.64	0.13
North West Leicestershire	Urban with Significant Rural	42	42	104702	4	0	0.74	99.26	42.23	57.65	0.12
Paisley and Renfrewshire South	Predominantly Urban	42	40	84635	2	0	0.1	99.9	7.41	92.55	0.04
Mole Valley	Urban with Significant Rural	42	44	96657	5	0.16	2.6	97.24	46.21	53.5	0.29
Loughborough	Predominantly Urban	42	43	109141	4	0	0.09	99.91	17.28	82.61	0.11
Harlow	Predominantly Urban	43	42	104376	3	0	0.4	99.6	2.68	97.23	0.09
Don Valley	Urban with Significant Rural	43	41	101713	2	0	0.21	99.79	14.72	85.2	0.08
Kirkcaldy and Cowdenbeath	Predominantly Urban	43	42	99438	2	0	0.05	99.95	17.25	82.67	0.08
St Helens South and Whiston	Predominantly Urban	43	41	105433	1	0	0.08	99.92	0	99.93	0.07
Halton	Predominantly Urban	43	42	97516	1	0	0	100	0	99.92	0.08

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Wellingborough	Predominantly Urban	43	43	115816	3	0	0.32	99.68	1	98.88	0.12
Sherwood	Predominantly Rural	44	43	104186	3	0	2.01	97.99	33.5	66.29	0.21
Normanton, Pontefract and Castleford	Predominantly Urban	44	43	118259	1	0	0	100	4.41	95.49	0.1
Beverley and Holderness	Predominantly Rural	44	44	99943	4	0.02	5.4	94.58	30.63	68.95	0.42
Mid Bedfordshire	Predominantly Rural	44	44	123013	5	0	3.17	96.83	27.53	72.06	0.41
East Kilbride, Strathaven and Lesmahagow		44	44	104954	4	0.01	0.14	99.85	25.6	74.17	0.23
East Worthing and Shoreham	Predominantly Urban	44	44	99623	4	0	0.05	99.95	4.97	94.79	0.24
Derbyshire Dales	Predominantly Rural	45	45	80827	5	0.93	6.05	93.02	65.44	33.91	0.65
Livingston	Urban with Significant Rural	45	45	113672	3	0	0.28	99.72	16.25	83.42	0.33
Cambridge	Predominantly Urban	45	45	133745	4	0	0	100	8.51	91.14	0.35
Hemel Hempstead	Predominantly Urban	45	45	107581	4	0.01	0.34	99.65	6.2	93.16	0.64
Maidenhead	Predominantly Urban	45	45	107948	5	0	0.18	99.82	2.65	96.59	0.76
Kenilworth and Southam	Predominantly Rural	45	45	91946	5	0	2.05	97.95	23.37	75.78	0.85
Rutland and Melton	Predominantly Rural	46	46	108057	5	0.02	9.07	90.91	53.26	45.53	1.21
Welwyn Hatfield	Predominantly Urban	46	46	114194	4	0	0.09	99.91	12.55	86.67	0.78
North East Fife	Predominantly Rural	46	46	82958	5	0.02	2.12	97.86	14.98	84.06	0.96
Cleethorpes	Urban with Significant Rural	46	46	94165	3	0.09	2.48	97.43	10.11	88.97	0.92
Hemsworth	Predominantly Rural	46	46	100236	2	0	0.08	99.92	19.57	79.64	0.79
Tewkesbury	Urban with Significant Rural	46	47	111573	5	0.02	0.76	99.22	15.03	83.99	0.98
East Surrey	Urban with Significant Rural	47	47	115301	5	0	0.58	99.42	16.43	82.6	0.97
Dunfermline and West Fife	Urban with Significant Rural	47	46	103992	4	0	0.52	99.48	7.66	91.41	0.93
Bury North	Predominantly Urban	47	47	91857	3	0	0.1	99.9	0.9	98.16	0.94
Keighley	Predominantly Urban	47	47	99384	3	0.01	0.85	99.14	8.06	90.95	0.99
Stourbridge	Predominantly Urban	47	47	90365	3	0	0	100	0.08	98.94	0.98
Coatbridge, Chryston and Bellshill	Predominantly Urban	47	47	96624	1	0	0.03	99.97	8.33	90.62	1.05
Calder Valley	Urban with Significant Rural	48	48	102573	3	0.16	1.22	98.62	33.3	65.51	1.19

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Sevenoaks	Urban with Significant Rural	48	48	97627	5	0.03	3.4	96.57	36.38	62.18	1.44
Stalybridge and Hyde	Predominantly Urban	48	48	97355	2	0	0.46	99.54	1.97	96.8	1.23
South West Devon	Urban with Significant Rural	48	48	93649	5	0.05	5.01	94.94	14.63	83.8	1.57
Woking	Predominantly Urban	48	48	111620	5	0	0.07	99.93	9.89	88.75	1.36
North Somerset	Urban with Significant Rural	48	48	103170	5	0	1.76	98.24	15.56	82.87	1.57
Poole	Predominantly Urban	49	49	100018	4	0	0	100	0	98.4	1.6
Aldridge-Brownhills	Predominantly Urban	49	49	77656	3	0	0.88	99.12	2.96	95.41	1.63
South Staffordshire	Urban with Significant Rural	49	49	95380	4	0	0.95	99.05	25.35	72.93	1.72
Hazel Grove	Predominantly Urban	49	49	80372	4	0	0.14	99.86	1.21	96.98	1.81
Oxford West and Abingdon	Predominantly Urban	49	49	108037	5	0	0.23	99.77	8.7	89.35	1.95
Eastleigh	Predominantly Urban	49	49	115316	5	0	0.2	99.8	3.47	94.58	1.95
Vale of Glamorgan	Urban with Significant Rural	50	50	102607	5	0.03	5.55	94.42	10.95	86.82	2.23
Bolton West	Predominantly Urban	50	50	99107	3	0	0.13	99.87	0.19	97.73	2.08
Batley and Spennings Dale	Predominantly Urban	50	50	110690	2	0	0.01	99.99	1.13	96.77	2.1
Wallasey	Predominantly Urban	50	50	88442	1	0	0	100	15.47	82.28	2.25
Cheltenham	Predominantly Urban	50	50	107125	4	0	0.03	99.97	0.82	96.8	2.38
North East Derbyshire	Predominantly Urban	50	50	92625	4	0.05	0.53	99.42	12.99	84.62	2.39
North Swindon	Predominantly Urban	51	51	121220	4	0	0.74	99.26	4.44	93.09	2.47
Warrington South	Predominantly Urban	51	51	114014	4	0	0.22	99.78	3.12	94.38	2.5
Houghton and Sunderland South	Predominantly Urban	51	51	89720	1	0	0.01	99.99	16.3	81.13	2.57
Basingstoke	Predominantly Urban	51	51	119495	4	0	0	100	0.18	97.18	2.64
Wokingham	Predominantly Urban	51	51	120031	5	0	0.05	99.95	13.31	83.79	2.9
Altrincham and Sale West	Predominantly Urban	51	52	100927	5	0	0.02	99.98	0	97.05	2.95
Midlothian	Urban with Significant Rural	52	51	94680	3	0.01	0.47	99.52	7.23	89.85	2.92
Middlesbrough South and East Cleveland	Urban with Significant Rural	52	52	95969	2	0.01	0.63	99.36	5.07	91.88	3.05
Mid Dorset and North Poole	Predominantly Urban	52	52	84408	5	0	0.57	99.43	21.61	75.04	3.35

Constituency	Rural/Urban group	Coverage / Deprivation index percentile (1 is worst)	Poor coverage percentile (1 is worst)	Population 2021	Deprivation quintile (1 is lowest)	4G not-spots	4G partial not-spots	4G All operators	5G not-spots	5G partial not-spots	5G All operators
Romsey and Southampton North	Urban with Significant Rural	52	52	91925	4	0.09	2.55	97.36	14.45	82.1	3.45
East Dunbartonshire		52	52	84067	5	0	0.02	99.98	33.1	63.45	3.45
Plymouth, Moor View	Predominantly Urban	52	52	95337	1	0	0.33	99.67	5.32	91.12	3.56
Lancaster and Fleetwood	Urban with Significant Rural	53	53	90477	2	0.2	1.59	98.21	8.63	87.5	3.87
South Basildon and East Thurrock	Predominantly Urban	53	53	103207	2	0	0	100	0.04	95.87	4.09
Daventry	Predominantly Rural	53	53	107580	5	0	2.69	97.31	24.92	70.64	4.44
North Warwickshire	Predominantly Rural	53	53	93663	3	0	1.34	98.66	21.05	74.57	4.38
Warrington North	Predominantly Urban	53	53	96959	3	0	0.28	99.72	0.01	95.63	4.36
Dudley South	Predominantly Urban	53	53	81590	2	0	0	100	6.27	89.2	4.53
Blackpool South	Predominantly Urban	54	54	81001	1	0	0	100	0	95.45	4.55
Brighton, Pavilion	Predominantly Urban	54	54	104740	4	0	0.03	99.97	2.28	93.08	4.64
Doncaster North	Predominantly Urban	54	54	98834	1	0	0.42	99.58	2.67	92.73	4.6
Sheffield, Hallam	Predominantly Urban	54	54	88741	5	0.22	0.6	99.18	3.42	91.42	5.16
Heywood and Middleton	Predominantly Urban	54	54	109388	1	0	0.15	99.85	0.69	94.32	4.99
Kingswood	Predominantly Urban	54	54	91396	4	0	0	100	0.01	94.5	5.49
Elmet and Rothwell	Urban with Significant Rural	55	55	104148	4	0	1.19	98.81	15.11	79.3	5.59
Halesowen and Rowley Regis	Predominantly Urban	55	55	92583	3	0	0	100	0	94.4	5.6
Erewash	Predominantly Urban	55	55	95174	3	0	0.07	99.93	0.38	93.89	5.73
Worsley and Eccles South	Predominantly Urban	55	55	107753	1	0	0.1	99.9	2.47	91.73	5.8
Newport East	Predominantly Urban	55	55	83913	2	0	0.18	99.82	0.54	93.42	6.04
Rother Valley	Urban with Significant Rural	55	55	99022	3	0	1.01	98.99	17.68	76.2	6.12
Dewsbury	Urban with Significant Rural	56	56	113631	3	0	0.21	99.79	19.65	74.17	6.18
Walsall North	Predominantly Urban	56	56	100420	1	0	0	100	0	93.82	6.18
Rochdale	Predominantly Urban	56	56	114386	1	0	0.69	99.31	0.21	93.42	6.37
Bromsgrove	Urban with Significant Rural	56	56	99183	5	0	0.31	99.69	3.39	90.1	6.51
Brentwood and Ongar	Urban with Significant Rural	56	56	98362	5	0	0.62	99.38	24.08	69.24	6.68

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Bournemouth East	Predominantly Urban	56	56	106935	3	0	0	100	0	93.45	6.55
East Lothian		57	57	109580	4	0.21	1.26	98.53	36.87	56.1	7.03
Blackburn	Predominantly Urban	57	57	114396	1	0	0	100	0.01	92.93	7.06
Dundee East	Predominantly Urban	57	57	90491	3	0	0.37	99.63	17.02	75.44	7.54
Southend West	Predominantly Urban	57	57	91623	4	0	0	100	0	92.25	7.75
South Derbyshire	Predominantly Rural	57	57	107208	4	0	2.88	97.12	9.7	82.4	7.9
Bolton North East	Predominantly Urban	57	57	101085	2	0	0	100	2.08	90.18	7.74
Basildon and Billericay	Predominantly Urban	58	58	97700	3	0	0	100	1.48	90.48	8.04
Cheadle	Predominantly Urban	58	58	95480	5	0	0	100	0	91.59	8.41
East Renfrewshire		58	58	96580	5	0	0.05	99.95	13.87	77.56	8.57
Sutton Coldfield	Predominantly Urban	58	58	96684	4	0	0.02	99.98	0.11	90.75	9.14
Guildford	Predominantly Urban	58	58	111355	5	0.01	2.61	97.38	25.31	64.91	9.78
Portsmouth South	Predominantly Urban	58	58	107869	1	0	0	100	0	90.43	9.57
Penistone and Stocksbridge	Predominantly Urban	59	59	89019	4	0	0.53	99.47	15.75	74.56	9.69
Wirral South	Predominantly Urban	59	59	72558	4	0	0.16	99.84	0.93	89.3	9.77
Portsmouth North	Predominantly Urban	59	59	100132	2	0	0	100	0	90.24	9.76
Stoke-on-trent South	Predominantly Urban	59	59	90737	2	0	0.03	99.97	0	90.15	9.85
Sefton Central	Predominantly Urban	59	59	84869	4	0	0.07	99.93	6.45	83.53	10.02
Bolton South East	Predominantly Urban	59	59	111407	1	0	0.03	99.97	0.3	89.7	10
Mid Derbyshire	Predominantly Urban	60	60	83942	5	0	0.01	99.99	37.79	51.91	10.3
Milton Keynes North	Predominantly Urban	60	60	139960	4	0	0.63	99.37	10.06	79.47	10.47
Walsall South	Predominantly Urban	60	60	106048	1	0	0.01	99.99	0.15	89.02	10.83
Stockport	Predominantly Urban	60	60	90294	2	0	0	100	0	88.78	11.22
Gordon	Predominantly Rural	60	60	104982	5	0.14	4.08	95.78	38.48	49.69	11.83
Gloucester	Predominantly Urban	60	60	122883	3	0	0.03	99.97	1.06	87.31	11.63
Southampton, Itchen	Predominantly Urban	61	61	110063	2	0	0.03	99.97	0	88.26	11.74
Glasgow South	Predominantly Urban	61	61	89110	2	0	0	100	0	88.11	11.89

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South North-amptonshire	Predominantly Rural	61	61	126534	5	0	2.68	97.32	23.92	63.71	12.37
North Durham	Predominantly Urban	61	61	87331	2	0	0.51	99.49	8.21	79.77	12.02
Blaydon	Predominantly Urban	61	61	88023	3	0	0.35	99.65	7.17	80.58	12.25
Newport West	Predominantly Urban	61	61	93233	3	0	0.54	99.46	1.02	86.68	12.3
Colne Valley	Predominantly Urban	62	62	112943	3	0	0.62	99.38	13.88	73.48	12.64
Birkenhead	Predominantly Urban	62	62	90275	1	0	0	100	0.42	87.05	12.53
Chesterfield	Predominantly Urban	62	62	93243	2	0	0.01	99.99	1.43	85.8	12.77
Paisley and Renfrewshire North	Urban with Significant Rural	62	62	95305	4	0	0.14	99.86	11.97	74.88	13.15
Swansea East	Predominantly Urban	62	62	82018	1	0	0.11	99.89	1.14	85.32	13.54
South Leicestershire	Urban with Significant Rural	62	62	110357	5	0	0.37	99.63	2.59	83	14.41
Rushcliffe	Predominantly Rural	63	63	101689	5	0	1.08	98.92	24.06	61.08	14.86
Beaconsfield	Predominantly Urban	63	63	105031	5	0	0.18	99.82	1.38	83.84	14.78
Stoke-on-trent North	Predominantly Urban	63	63	99514	1	0	0	100	0.29	85.05	14.66
Birmingham, Northfield	Predominantly Urban	63	63	105895	1	0	0	100	0	85.22	14.78
Milton Keynes South	Predominantly Urban	63	63	147103	3	0	0.01	99.99	2.5	81.32	16.18
Wansbeck	Urban with Significant Rural	63	63	83291	2	0	0.43	99.57	0.37	83.42	16.21
Dudley North	Predominantly Urban	64	64	86250	2	0	0.03	99.97	0	83.01	16.99
Wentworth and Dearne	Predominantly Urban	64	64	100613	1	0	0.19	99.81	7.51	75.13	17.36
Doncaster Central	Predominantly Urban	64	64	107557	2	0	0	100	6.1	76.22	17.68
West Dunbartonshire	Predominantly Urban	64	64	87790	1	0	0.03	99.97	2.67	79.53	17.8
Charnwood	Predominantly Urban	64	65	104918	5	0	0.97	99.03	12.36	68.65	18.99
Windsor	Predominantly Urban	64	65	109360	5	0	0.03	99.97	1.75	78.66	19.59
Wakefield	Predominantly Urban	65	64	100848	2	0	0.02	99.98	1.26	79.99	18.75
Cardiff North	Predominantly Urban	65	76	90343	5	0	0.02	99.98	0	43.34	56.66
Swansea West	Predominantly Urban	65	65	78413	4	0	0.02	99.98	5.96	74.77	19.27
Stoke-on-trent Central	Predominantly Urban	65	64	88173	1	0	0	100	0	81.1	18.9

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Epping Forest	Predominantly Urban	65	65	102613	4	0	0.37	99.63	1.69	78.77	19.54
West Bromwich West	Predominantly Urban	65	65	101374	1	0	0	100	0	81.08	18.92
Inverness, Nairn, Badenoch and Strathspey	Urban with Significant Rural	66	65	106881	4	0.18	3.73	96.09	21.39	58.97	19.64
York Outer	Urban with Significant Rural	66	67	98129	5	0	0.89	99.11	6.67	68.97	24.36
Edinburgh South		66	80	92308	5	0	0	100	0	22.82	77.18
Epsom and Ewell	Predominantly Urban	66	81	111718	5	0	0.01	99.99	0	57.14	42.86
South West Hertfordshire	Predominantly Urban	66	67	110670	5	0	0.54	99.46	13.87	63.16	22.97
Esher and Walton	Predominantly Urban	66	81	115802	5	0	0.06	99.94	1.11	48.16	50.73
Wimbledon	Predominantly Urban	67	100	101215	5	0	0.02	99.98	0	12.98	87.02
Haltemprice and Howden	Urban with Significant Rural	67	84	90466	5	0	2.71	97.29	25.4	43.81	30.79
Richmond Park	Predominantly Urban	67	95	121411	5	0	0.03	99.97	0	38.21	61.79
Twickenham	Predominantly Urban	67	98	117773	5	0	0	100	0	33.48	66.52
Beckenham	Predominantly Urban	67	71	92777	5	0	0.08	99.92	0	46.56	53.44
St Albans	Predominantly Urban	67	68	103826	5	0	0.03	99.97	0.01	75.52	24.47
Aberdeen South	Predominantly Urban	68	70	96564	5	0	0.99	99.01	8.7	54.28	37.02
Oldham East and Saddleworth	Predominantly Urban	68	66	108605	2	0	0.76	99.24	1.8	78.56	19.64
Edinburgh West		68	80	101741	5	0	0.03	99.97	0.35	22.58	77.07
South Swindon	Predominantly Urban	68	66	112193	3	0	0.18	99.82	3.34	76.64	20.02
Ruislip, Northwood and Pinner	Predominantly Urban	68	95	100303	5	0	0.02	99.98	0	48.5	51.5
Sutton and Cheam	Predominantly Urban	68	98	104955	5	0	0	100	0	43.26	56.74
Harborough	Predominantly Urban	69	85	109411	5	0	0.56	99.44	5.44	61.86	32.7
Broxbourne	Predominantly Urban	69	66	104647	3	0	0.06	99.94	2.37	77.34	20.29
Runnymede and Weybridge	Predominantly Urban	69	68	111029	5	0	0.21	99.79	2.07	73.59	24.34
Filton and Bradley Stoke	Predominantly Urban	69	82	106211	5	0	0.01	99.99	0	62.49	37.51
Reigate	Predominantly Urban	69	68	107469	5	0	0.13	99.87	9.38	65.43	25.19
Old Bexley and Sidcup	Predominantly Urban	69	94	89684	5	0	0	100	0	37.67	62.33

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Edinburgh North and Leith		70	80	116581	5	0	0	100	0.09	24.42	75.49
Orpington	Predominantly Urban	70	94	92824	5	0	0.61	99.39	0.34	48.7	50.96
Gedling	Predominantly Urban	70	66	94681	4	0	0.04	99.96	0.87	78.33	20.8
Solihull	Predominantly Urban	70	97	101638	5	0	0	100	0	62.4	37.6
Kingston and Surbiton	Predominantly Urban	70	87	124162	5	0	0.01	99.99	0	66.83	33.17
Broxtowe	Predominantly Urban	70	75	96313	5	0	0	100	0.03	70.07	29.9
Edinburgh South West		71	80	105430	5	0	2.69	97.31	3.47	13.77	82.76
Reading East	Predominantly Urban	71	67	120558	4	0	0.01	99.99	0	76.5	23.5
Chipping Barnet	Predominantly Urban	71	77	117514	4	0	0	100	0	38.13	61.87
Croydon South	Predominantly Urban	71	78	119186	4	0	0.41	99.59	0.4	63.11	36.49
Hertsmere	Predominantly Urban	71	85	107822	4	0	0	100	0	44.72	55.28
Watford	Predominantly Urban	71	99	128552	4	0	0	100	0	23.72	76.28
Hornchurch and Upminster	Predominantly Urban	72	86	112633	4	0	0.11	99.89	0	59.84	40.16
Finchley and Golders Green	Predominantly Urban	72	82	126044	4	0	0	100	0	41.74	58.26
Spelthorne	Predominantly Urban	72	97	102958	4	0	0	100	0	44.99	55.01
Leeds North West	Predominantly Urban	72	89	87347	4	0	0.83	99.17	13.92	50	36.08
Pudsey	Predominantly Urban	72	94	97860	4	0	0.01	99.99	3.39	50.73	45.88
Uxbridge and South Ruislip	Predominantly Urban	72	99	112279	4	0	0	100	0	29.52	70.48
Putney	Predominantly Urban	73	95	100789	4	0	0.29	99.71	0	19.36	80.64
York Central	Predominantly Urban	73	100	104686	4	0	0	100	0.64	49.26	50.1
Harrow West	Predominantly Urban	73	85	116945	4	0	0	100	0	15.49	84.51
Bromley and Chislehurst	Predominantly Urban	73	75	96092	4	0	0.18	99.82	0.25	30.35	69.4
Romford	Predominantly Urban	73	95	106612	4	0	0.01	99.99	0	13.73	86.27
Stockton South	Predominantly Urban	73	69	103558	4	0	0.02	99.98	11.46	63.22	25.32
Battersea	Predominantly Urban	74	71	119428	4	0	0	100	0	9.85	90.15
Bexleyheath and Crayford	Predominantly Urban	74	71	94615	4	0	0	100	0	24.82	75.18
Carshalton and Wallington	Predominantly Urban	74	76	104688	4	0	0	100	0	15.94	84.06

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Harrow East	Predominantly Urban	74	85	111186	4	0	0	100	0	19.47	80.53
Edinburgh East		74	80	110410	4	0	0	100	0	16.33	83.67
Enfield, Southgate	Predominantly Urban	74	81	102962	4	0	0.02	99.98	0	22.51	77.49
Ilford North	Predominantly Urban	75	86	115265	4	0	0.3	99.7	0	19.7	80.3
Hampstead and Kilburn	Predominantly Urban	75	84	128685	4	0	0	100	0	3.19	96.81
Shipley	Predominantly Urban	75	68	97425	4	0	0.22	99.78	1.31	74.34	24.35
Tynemouth	Predominantly Urban	75	98	101325	4	0	0	100	0.5	37.74	61.76
Leeds North East	Predominantly Urban	75	88	96183	3	0	0.08	99.92	0.05	42.19	57.76
Cities of London and Westminster	Predominantly Urban	75	77	101040	3	0	0	100	0	5.48	94.52
Meriden	Predominantly Urban	76	92	114598	3	0	0.1	99.9	6.33	60.64	33.03
Chelsea and Fulham	Predominantly Urban	76	76	101756	3	0	0	100	0	3.76	96.24
Tooting	Predominantly Urban	76	98	107288	3	0	0	100	0	12.99	87.01
Dartford	Predominantly Urban	76	78	122686	3	0	0.12	99.88	1.12	51.72	47.16
Morley and Outwood	Predominantly Urban	76	92	104619	3	0	0	100	0.6	66	33.4
Reading West	Predominantly Urban	76	67	112398	3	0	0	100	2.33	73.38	24.29
Hove	Predominantly Urban	77	86	101536	3	0	0	100	6.43	48.82	44.75
Oxford East	Predominantly Urban	77	94	131457	3	0	0	100	0.59	70.13	29.28
Chingford and Woodford Green	Predominantly Urban	77	76	95975	3	0	0	100	0	21.24	78.76
Glasgow North	Predominantly Urban	77	83	78163	3	0	0	100	0.04	26.33	73.63
Cardiff Central	Predominantly Urban	77	75	92205	3	0	0	100	0	32.06	67.94
Hendon	Predominantly Urban	77	85	145788	3	0	0	100	0	19.98	80.02
Bristol West	Predominantly Urban	78	75	139964	3	0	0	100	0.13	53.44	46.43
Brentford and Isleworth	Predominantly Urban	78	74	143871	3	0	0.03	99.97	0	7.48	92.52
Coventry South	Predominantly Urban	78	77	113626	3	0	0	100	0	46.18	53.82
Ealing Central and Acton	Predominantly Urban	78	79	129220	3	0	0	100	0	10.41	89.59
Gravesham	Predominantly Urban	78	83	106902	3	0.02	0.64	99.34	6.94	42.2	50.86
Hornsey and Wood Green	Predominantly Urban	78	86	124602	3	0	0	100	0	13.88	86.12

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Coventry North West	Predominantly Urban	79	77	107287	3	0	0.11	99.89	0.54	64.35	35.11
Aberdeen North	Predominantly Urban	79	70	99341	3	0	0	100	0	48.02	51.98
Mitcham and Morden	Predominantly Urban	79	92	113973	3	0	0	100	0	9.84	90.16
Cardiff West	Predominantly Urban	79	76	95046	2	0	0.48	99.52	2.72	60.88	36.4
Bristol North West	Predominantly Urban	79	74	110051	3	0	0	100	1.47	52.75	45.78
Newcastle Upon Tyne North	Predominantly Urban	79	93	97582	3	0	0	100	0.3	66.77	32.93
Brent North	Predominantly Urban	80	74	144921	3	0	0	100	0	13.7	86.3
Derby North	Predominantly Urban	80	78	103234	3	0	0	100	0	41.49	58.51
Ilford South	Predominantly Urban	80	87	147347	3	0	0	100	0	11.12	88.88
Stretford and Urmston	Predominantly Urban	80	97	101763	3	0	0	100	0	52.7	47.3
Westminster North	Predominantly Urban	80	100	111783	3	0	0	100	0	8.42	91.58
Kensington	Predominantly Urban	80	87	106946	3	0	0	100	0	19.46	80.54
Bury South	Predominantly Urban	81	75	101994	3	0	0.01	99.99	0.64	60.37	38.99
Plymouth, Sutton and Devonport	Predominantly Urban	81	66	112655	1	0	0	100	0.09	78.27	21.64
Eltham	Predominantly Urban	81	81	97148	2	0	0	100	0	24.95	75.05
Bournemouth West	Predominantly Urban	81	67	107624	2	0	0	100	0	75.96	24.04
Newcastle Upon Tyne East	Predominantly Urban	81	92	98778	2	0	0	100	0	52.05	47.95
Leyton and Wanstead	Predominantly Urban	81	90	107677	2	0	0	100	0	12.37	87.63
Thurrock	Predominantly Urban	82	98	131435	2	0	0.06	99.94	0	50.61	49.39
Sheffield Central	Predominantly Urban	82	96	117818	2	0	0	100	0	40.48	59.52
Wolverhampton South West	Predominantly Urban	82	69	87559	2	0	0	100	0.38	72.84	26.78
Luton North	Predominantly Urban	82	91	108751	2	0	0	100	0	48.74	51.26
Croydon Central	Predominantly Urban	82	77	124878	2	0	0.06	99.94	0	25.86	74.14
Northampton North	Predominantly Urban	82	93	93196	2	0	0	100	0.11	53.39	46.5
Cardiff South and Penarth	Predominantly Urban	83	76	114045	2	0	0.15	99.85	0	36.57	63.43
Ealing North	Predominantly Urban	83	79	129903	2	0	0	100	0	13.64	86.36

Constituency	Rural/Urban group	Coverage / Deprivation index percentile (1 is worst)	Poor coverage percentile (1 is worst)	Population 2021	Deprivation quintile (1 is lowest)	4G not-spots	4G partial not-spots	4G All operators	5G not-spots	5G partial not-spots	5G All operators
Slough	Predominantly Urban	83	96	152083	2	0	0	100	0	47.55	52.45
Rochford and Southend East	Predominantly Urban	83	95	105870	2	0	0.44	99.56	0.48	64.64	34.88
Streatham	Predominantly Urban	83	97	118510	2	0	0	100	0	24.96	75.04
Lewisham West and Penge	Predominantly Urban	83	90	111827	2	0	0	100	0	12.67	87.33
North Tyneside	Predominantly Urban	84	93	107639	2	0	0	100	0.02	53.5	46.48
Holborn and St Pancras	Predominantly Urban	84	86	126628	2	0	0	100	0	7.83	92.17
Dulwich and West Norwood	Predominantly Urban	84	79	113878	2	0	0	100	0	4.07	95.93
Northampton South	Predominantly Urban	84	93	106827	2	0	0	100	0	29.27	70.73
Erith and Thamesmead	Predominantly Urban	84	81	118300	2	0	0.07	99.93	0	33.72	66.28
Manchester, Withington	Predominantly Urban	84	91	100271	2	0	0	100	0	34.26	65.74
Wythenshawe and Sale East	Predominantly Urban	85	66	111577	1	0	0.01	99.99	0	77.82	22.18
Rutherglen and Hamilton West	Predominantly Urban	85	96	106376	2	0	0.01	99.99	0.24	70.17	29.59
Sheffield South East	Predominantly Urban	85	96	94026	2	0	0.14	99.86	0.07	57.39	42.54
Nottingham South	Predominantly Urban	85	94	116704	2	0	0	100	0	50.93	49.07
Ealing, Southall	Predominantly Urban	85	79	107997	2	0	0	100	0	8.38	91.62
Feltham and Heston	Predominantly Urban	85	82	144308	2	0	0	100	0	13.95	86.05
Poplar and Limehouse	Predominantly Urban	86	94	167285	2	0	0	100	0	9.41	90.59
Greenwich and Woolwich	Predominantly Urban	86	83	135800	2	0	0	100	0	23.58	76.42
Hammersmith	Predominantly Urban	86	84	117829	2	0	0	100	0	5.33	94.67
Luton South	Predominantly Urban	86	91	123502	2	0	0.02	99.98	1.43	46.94	51.63
Hayes and Harlington	Predominantly Urban	86	85	126400	2	0	0	100	0	11.99	88.01
Enfield North	Predominantly Urban	86	81	108992	2	0	0	100	0	39.03	60.97
Bristol East	Predominantly Urban	87	74	104315	2	0	0	100	0	68.89	31.11
Sheffield, Heeley	Predominantly Urban	87	68	93036	2	0	0.01	99.99	0	74.82	25.18
Jarrow	Predominantly Urban	87	68	83844	2	0	0	100	0.26	74.69	25.05
Redcar	Predominantly Urban	87	69	87414	2	0	0.17	99.83	2.84	71.73	25.43
Glasgow North West	Predominantly Urban	87	83	87866	1	0	0	100	0	46.49	53.51

Constituency	Rural/Urban group	Coverage / Deprivation index percentile (1 is worst)	Poor coverage percentile (1 is worst)	Population 2021	Deprivation quintile (1 is lowest)	4G not-spots	4G partial not-spots	4G All operators	5G not-spots	5G partial not-spots	5G All operators
Southampton, Test	Predominantly Urban	87	69	110532	2	0	0.02	99.98	0	74.02	25.98
Bermondsey and Old Southwark	Predominantly Urban	88	71	142763	2	0	0	100	0	12.85	87.15
Dagenham and Rainham	Predominantly Urban	88	78	115797	2	0	0	100	0	9.12	90.88
Sunderland Central	Predominantly Urban	88	69	97414	2	0	0.06	99.94	4.23	68.25	27.52
Stockton North	Predominantly Urban	88	97	93037	2	0	0.62	99.38	1.48	52.38	46.14
Huddersfield	Predominantly Urban	88	86	95941	2	0	0.02	99.98	0.2	42.96	56.84
Leicester South	Predominantly Urban	88	89	128257	2	0	0	100	0	23.96	76.04
Dundee West	Predominantly Urban	89	70	87961	1	0	0.46	99.54	3.01	68.69	28.3
Denton and Reddish	Predominantly Urban	89	78	87827	1	0	0	100	0	68.75	31.25
Lewisham East	Predominantly Urban	89	89	109141	1	0	0	100	0	10.85	89.15
Leicester East	Predominantly Urban	89	89	127146	1	0	0	100	0	46.26	53.74
Bristol South	Predominantly Urban	89	74	118142	1	0	0	100	0	52.59	47.41
Islington South and Finsbury	Predominantly Urban	89	87	106759	1	0	0	100	0	5.49	94.51
Lewisham, Deptford	Predominantly Urban	90	90	127883	1	0	0	100	0	8	92
Croydon North	Predominantly Urban	90	78	146653	1	0	0	100	0	11.9	88.1
Washington and Sunderland West	Predominantly Urban	90	99	87046	1	0	0	100	0	66.24	33.76
Halifax	Predominantly Urban	90	84	104054	1	0	0.01	99.99	2.7	56.17	41.13
Walthamstow	Predominantly Urban	90	99	122423	1	0	0	100	0	15.53	84.47
Newcastle Upon Tyne Central	Predominantly Urban	90	92	103748	1	0	0	100	0	33.52	66.48
Vauxhall	Predominantly Urban	91	99	122106	1	0	0	100	0	4.55	95.45
Garston and Halewood	Predominantly Urban	91	82	101292	1	0	0	100	0	39.38	60.62
Islington North	Predominantly Urban	91	87	109827	1	0	0	100	0	0.28	99.72
Coventry North East	Predominantly Urban	91	77	124410	1	0	0	100	0	48.59	51.41
Derby South	Predominantly Urban	91	79	118517	1	0	0	100	0	44.72	55.28
Birmingham, Edgbaston	Predominantly Urban	91	71	100127	1	0	0	100	0	47.86	52.14
Oldham West and Royton	Predominantly Urban	92	67	112024	1	0	0	100	0	76.81	23.19

Constituency	Rural/Urban group	Coverage / Deprivation index percentile (1 is worst)	Poor coverage percentile (1 is worst)	Population 2021	Deprivation quintile (1 is lowest)	4G not-spots	4G partial not-spots	4G All operators	5G not-spots	5G partial not-spots	5G All operators
Camberwell and Peckham	Predominantly Urban	92	75	128032	1	0	0	100	0	9.69	90.31
Glasgow Central	Predominantly Urban	92	82	107093	1	0	0	100	0	23.04	76.96
Birmingham, Selly Oak	Predominantly Urban	92	72	109606	1	0	0	100	0	62.24	37.76
Salford and Eccles	Predominantly Urban	92	96	129174	1	0	0.03	99.97	0	32.92	67.08
South Shields	Predominantly Urban	92	97	80393	1	0	1.35	98.65	4.47	61.5	34.03
Wolverhampton North East	Predominantly Urban	93	100	92639	1	0	0	100	0	50.4	49.6
East Ham	Predominantly Urban	93	79	166956	1	0	0	100	0	4.19	95.81
Liverpool, Wavertree	Predominantly Urban	93	90	92114	1	0	0	100	0	23.69	76.31
Brent Central	Predominantly Urban	93	74	149717	1	0	0	100	0	1.85	98.15
Kingston Upon Hull West and Hessle	Predominantly Urban	93	88	90222	1	0	0	100	0	13.57	86.43
Rotherham	Predominantly Urban	93	95	90618	1	0	0.02	99.98	0.44	39.69	59.87
Ashton-under-Lyne	Predominantly Urban	94	70	95976	1	0	0.09	99.91	0.15	68.23	31.62
Gateshead	Predominantly Urban	94	82	91669	1	0	0	100	0	59.16	40.84
Kingston Upon Hull East	Predominantly Urban	94	87	91317	1	0	0	100	0	12.31	87.69
Bethnal Green and Bow	Predominantly Urban	94	71	143024	1	0	0	100	0	11.77	88.23
Liverpool, Riverside	Predominantly Urban	94	90	125347	1	0	0	100	0	32	68
West Ham	Predominantly Urban	94	100	184091	1	0	0	100	0	1.25	98.75
Edmonton	Predominantly Urban	95	80	118033	1	0	0	100	0	4.22	95.78
Hackney North and Stoke Newington	Predominantly Urban	95	84	134212	1	0	0	100	0	2.02	97.98
Kingston Upon Hull North	Predominantly Urban	95	88	100964	1	0	0	100	0	15.04	84.96
West Bromwich East	Predominantly Urban	95	69	96424	1	0	0	100	0	73.06	26.94
Leicester West	Predominantly Urban	95	89	113169	1	0	0.01	99.99	0	35.17	64.83
Leeds East	Predominantly Urban	95	88	104889	1	0	0	100	0.06	32.52	67.42
Warley	Predominantly Urban	96	99	103333	1	0	0	100	0	45.15	54.85
Bradford South	Predominantly Urban	96	73	106440	1	0	0	100	2.58	42.87	54.55

Constituency	Rural/Urban group	Coverage / Deprivation index percentile (1 is worst)	Poor coverage percentile (1 is worst)	Population 2021	Deprivation quintile (1 is lowest)	4G not-spots	4G partial not-spots	4G All operators	5G not-spots	5G partial not-spots	5G All operators
Leeds West	Predominantly Urban	96	89	99054	1	0	0	100	0	11.93	88.07
Middlesbrough	Predominantly Urban	96	92	97076	1	0	0	100	0.08	56.27	43.65
Nottingham East	Predominantly Urban	96	93	107568	1	0	0	100	0	51.05	48.95
Birmingham, Hall Green	Predominantly Urban	96	72	121913	1	0	0	100	0	50.99	49.01
Tottenham	Predominantly Urban	97	98	139639	1	0	0	100	0	5.35	94.65
Wolverhampton South East	Predominantly Urban	97	100	96940	1	0	0	100	0	23.36	76.64
Bootle	Predominantly Urban	97	73	101381	1	0	0	100	0	60.79	39.21
Barking	Predominantly Urban	97	70	145889	1	0	0	100	0	19.92	80.08
Birmingham, Perry Barr	Predominantly Urban	97	72	112441	1	0	0	100	0.09	53.51	46.4
Hackney South and Shoreditch	Predominantly Urban	97	84	124933	1	0	0	100	0	8.82	91.18
Glasgow South West	Predominantly Urban	98	83	88999	1	0	0	100	0	44.29	55.71
Manchester Central	Predominantly Urban	98	91	156302	1	0	0	100	0	35.13	64.87
Sheffield, Brightside and Hillsborough	Predominantly Urban	98	96	109078	1	0	0	100	0.01	48.73	51.26
Leeds Central	Predominantly Urban	98	88	151891	1	0	0	100	0	3.4	96.6
Bradford East	Predominantly Urban	98	73	121816	1	0	0	100	0	24.82	75.18
Manchester, Gorton	Predominantly Urban	98	91	120229	1	0	0	100	0	26.55	73.45
Birmingham, Yardley	Predominantly Urban	99	73	116961	1	0	0	100	0	48.75	51.25
Bradford West	Predominantly Urban	99	73	121356	1	0	0	100	0.79	23.91	75.3
Knowsley	Predominantly Urban	99	88	111399	1	0	0	100	0.2	53.15	46.65
Liverpool, West Derby	Predominantly Urban	99	91	94779	1	0	0	100	0	27	73
Glasgow East	Predominantly Urban	99	70	96793	1	0	0.03	99.97	0.26	70.77	28.97
Nottingham North	Predominantly Urban	99	93	99360	1	0	0	100	0	46.59	53.41
Birmingham, Ladywood	Predominantly Urban	100	72	144061	1	0	0	100	0	58.29	41.71
Glasgow North East	Predominantly Urban	100	83	88255	1	0	0	100	0	36.14	63.86
Birmingham, Erdington	Predominantly Urban	100	72	104854	1	0	0	100	0	47.91	52.09

Constituency	Rural/Urban group	Coverage / Deprivation index percentile (1 is worst)	Poor coverage percentile (1 is worst)	Population 2021	Deprivation quintile (1 is lowest)	4G not-spots	4G partial not-spots	4G All operators	5G not-spots	5G partial not-spots	5G All operators
Blackley and Broughton	Predominantly Urban	100	73	128912	1	0	0	100	0	32.1	67.9
Birmingham, Hodge Hill	Predominantly Urban	100	72	132373	1	0	0	100	0	35.08	64.92
Liverpool, Walton	Predominantly Urban	100	90	93311	1	0	0	100	0	40.45	59.55

Endnotes

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