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# Connected Nations update

## Spring 2023

Welsh translation available

**REPORT:**

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## Section



## Annex

# 1. Overview

This is the first interim update to our annual Connected Nations 2022 report. It is based on mobile coverage and fixed broadband availability across the UK as of January 2023. We also include an update on the coverage of small and medium enterprises, which we last reported on in December 2021.

### Main findings

**Number of homes able to get gigabit-capable broadband is up** to almost 21.9 million homes (73% of all UK homes), up from 20.8 million (70%) since our last update.

**Full-fibre coverage continues to increase at pace up to** 48% from 42%, an increase of six percentage points in the four months between September 2022 and January 2023.

**Superfast broadband coverage across the UK** overall remains at 97%, but with Northern Ireland seeing an increase of almost two percentage points in superfast coverage. Scotland and Wales have both benefitted from an increase of a percentage point.

**Gigabit-capable, full-fibre and superfast broadband coverage for small and medium enterprises (SMEs) has also increased** since we last reported on this in December 2021. But SME coverage continues to be lower compared to residential – full-fibre SME coverage is 43%, with gigabit-capable at 70%.

**The number of premises unable to get decent broadband**, when factoring in fixed wireless and fixed line, has dropped from 80,000 to 68,000 premises since our December 2022 report.

**Mobile coverage remains stable** and operators continue to roll out coverage to new areas through the **Shared Rural Network** scheme, agreed with the UK Government in 2020. As a result, nationwide coverage is set to increase in the coming years. 5G coverage continues to edge forward steadily as can be seen from the coverage figures in the tables below with 82% of premises being able to get a 5G signal outdoors with a high degree of confidence.

As with previous updates, we have published an interactive report that has both the latest and historical data.

We have also used the data collected for this report to update our broadband and mobile coverage checker.

## Main findings – Fixed broadband

**Gigabit-capable broadband:** availability of broadband capable of delivering gigabit[1] speeds for consumers continues to improve at a rapid pace, with nearly 21.9 million UK homes[2] (73%) now able

[1] Gigabit capable networks include full-fibre networks as well as any network that is able to offer at least 1Gbit/s download speeds (such as the latest version of Virgin Media O2's cable network technology – DOCSIS 3.1).

[2] Note that we report on residential properties (homes) for full fibre, gigabit capable and superfast coverage, but report on both residential and commercial properties for 'decent' broadband.

to access these faster services, up from 20.8 million (70%) reported in our December 2022 report and an increase of seven percentage points in one year. This has been driven by the continued rollout of full-fibre broadband by many network operators, both well established and new market entrants. In parallel Virgin Media O2 has announced plans to upgrade its cable network to full fibre in the period to 2028.[3]

**Full fibre deployment:** Almost half (48%) of UK homes now have access to full-fibre services, that is an increase of 15 percentage points in one year. Full fibre coverage is now at 14.2 million, up from 12.5 million (42%) reported in our December 2022 report. This is driven predominantly through deployments by the larger fibre infrastructure operators but supported by a number of smaller providers across the UK serving individual communities and regions. Some of these deployments benefit from a range of public sector funding schemes which we outline below.

**Superfast broadband** (download speeds of at least 30 Mbit/s): Superfast broadband rollout across the UK continues to grow although at a reduced pace (coverage remains at 97% of UK homes). This may be due to the additional difficulty in reaching the final 3% of properties, although publicly funded schemes may improve this.

**Decent broadband** (at least 10 Mbit/s download and 1 Mbit/s upload speed): the vast majority of UK properties can access decent broadband. The number of properties (both residential and commercial) that cannot receive a decent broadband service from a fixed line stands at around 435,000 (down to 1.4%), having decreased from around half a million since our December 2022 report.

Broadband services are also available from Fixed Wireless Access (FWA) networks, provided via mobile networks or through Wireless Internet Service Providers (WISPs). If managed well, FWA networks can deliver a decent broadband service, and can be used as an alternative network technology where consumers do not have access to a decent broadband connection over a fixed network. We continue to collect data from WISPs and based on the coverage reported by these providers, this remains at 7% of premises able to receive a decent broadband service from a WISP (the same as in our December 2022 report). FWA coverage from mobile networks capable of providing decent broadband is available to almost 95% of premises.

Factoring in the coverage estimates provided by FWA providers, we estimate that at present there remain around 68,000 premises that do not have access to a decent broadband service from a fixed network or an FWA network. This has fallen from our estimate of 80,000 in our December 2022 report.

Of these, around 54,000 premises are not expected to be covered by rollout of publicly funded schemes within the next twelve months, down from 65,000 in our December 2022 report. These premises may be eligible for the broadband Universal Service Obligation (USO) product subject to further checks and confirmation by the universal service providers (BT and KCOM).

[3] Liberty Global, Virgin Media O2 announces 2028 fibre upgrade plan, 29 July 2021.

The above figures show the availability of broadband services across the UK, and important figures are noted in the dashboards below; we shall report on take-up of broadband services in more detail in our annual Connected Nations report for 2023.

## Main findings – Mobile

We measure mobile coverage in a way that reflects the likely experience of people using their mobile phones[4]

There has not been a significant increase in coverage since our last update, but the industry continues to develop its coverage footprint.

**4G:** Coverage of 4G mobile networks across the UK has not seen significant changes over the last reporting periods. Around 92% of the UK landmass is predicted to have good outdoor 4G coverage from at least one operator, and this area includes nearly all of the premises in the UK. This is expected to rise to 95% by end of 2025 as a result of the SRN[5]. Coverage for both Scotland and Wales is currently significantly lower. It should be noted that individual MNOs are committed to achieving between 85% and 88% coverage in Wales by 2027[6] under the UK Government's SRN investment, and between 82% and 85% in Scotland from a combination of this and Scotland's 4G infill programme.

**4G not-spots:** The UK has both geographic and road not-spots (that is, areas where good 4G services are not available from any mobile operator). Geographic not-spots have remained the same since our December 2022 report at 8%. Road coverage remains largely the same with just 4% of all roads estimated to be an in-vehicle not-spot. This varies significantly across individual nations, particularly in Scotland and also in Wales. Wales has benefited by a percentage point drop in geographic not-spots since our December report, which we attribute to the SRN scheme.

**Calls and text coverage:** As with 4G, predicted coverage for calls and text services remains largely unchanged over the previous reporting periods. The range of predicted coverage by MNOs varies from 85-93% of the UK landmass, depending upon operator. In addition, 99% of all UK premises are predicted to have coverage for outdoor voice calls from all MNOs.

**Calls/text not-spots:** Areas where people are unable to make a call or send a text from any operator (not-spots) is similarly unchanged, with around 4% of the UK geography estimated as a not-spot, and around 2% of the UK's roads estimated to be a not-spot for calls and texts made or received in vehicle. As with 4G, there are marked variations for individual nations; for example, geographic not-spots across Scotland remain higher than for the rest of the UK, at around 10%.

**5G**: We continue to report on 5G coverage (outdoors premises) from 'All MNOs' and from 'At least one MNO', with coverage confidence levels ranging from high to very high. Coverage from 'At least one MNO' now ranges from 73% (very high confidence) to 82% (high confidence) of premises outdoors, up from 67% and 78% respectively when we reported in our December 2022 report.[7]

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[4] Detailed definitions are available in the methodology for our Connected Nations 2022 report.

[5] House of Commons Library, Rural mobile coverage in the UK: Not-spots and partial not-spots, 6 April 2022.

[6] This has been revised for 2026.

[7] We note that work to validate MNO's new 5G predictions remains ongoing.

# Schemes across the UK and Nations supporting broadband and mobile network deployment

The Government has an ambition to get gigabit broadband to at least 85% of premises by 2025 and over 99% by 2030. While in the majority of the UK telecoms operators are expected to deliver gigabit broadband on a commercial basis, public schemes play an important part in connecting more remote, rural premises. The Government is investing £5 billion to level up hard-to-reach premises.

The Government targets for mobile include a target of 95% UK geographic coverage for 4G, and in April the Government published the Wireless Infrastructure Strategy where it announced a new ambition for the UK to have nationwide coverage of standalone 5G to all populated areas by 2030.

**England:** Since our Connected Nations publication in December 2022, the Government has announced the award of a further four contracts in Cambridgeshire, Cornwall, New Forest and Shropshire.

**Scotland:** The Scottish Government's £600m Reaching 100% (R100) programme continues to progress. The scheme is intended to reach 114,000 premises through three strands of activity: the R100 contracts, the Scottish Broadband Voucher Scheme (SBVS) and continued commercial coverage. The scheme was originally intended to enable access to superfast broadband (30Mbps), but in practice all of the contract build in the South and North, and the vast majority in Central, will be gigabit capable.

The most recent data provided to Ofcom by the Scottish Government shows that approximately 21,300 rural homes and businesses have been connected through the R100 contracts, and 3,076 vouchers have been delivered by 50 registered suppliers. This makes up almost 20% of the total number of premises to be connected by March 2028.

The Scottish Government's £28.75m 4G Infill Programme is currently working to extend 4G infrastructure and services in up to 55 mobile "not-spots" across rural and remote parts of Scotland. The programme is nearing completion, having deployed 49 masts across Scotland, with the final masts due to be completed by the end of this Spring[8].

The UK Shared Rural Network project is progressing alongside the 4G infill programme, with the first UK government-funded rural mast upgrade in Scotland announced on 3 May 2023. This will deliver 4G coverage to residents in the east of Dumfries and Galloway, benefitting people living in Boreland, Eskdalemuir, Lochmaben and other neighbouring villages.

**Wales:** The Welsh Government's £56m full fibre roll-out with Openreach has so far reached 35,770 premises that would not otherwise have been connected to full-fibre broadband. The Local Broadband Fund supports local authorities and social enterprises to deliver broadband to whole communities. The fund has provided grant funding to schemes across Wales including in Monmouthshire, Cardiff and Gwynedd. The Access Broadband Cymru grant scheme provides a

[8] ISP Review, EE UK put two new 4G mobile masts live on Orkney in Scotland, 26 April 2023.

broadband safety net though funding of up to £800 to connect individual homes, businesses and third-sector premises.[9]

Ogi is investing £200m to build a 10Gbps capable full-fibre network across a phase 1 target of 150,000 premises in Wales by 2025. It plans to extend its roll-out into Cardiff city centre, serving areas of the city where there has been significant growth in recent years. To date, Ogi has connected 47,500 premises in locations across Wales including Haverfordwest, Rhoose, Llantwit Major, St Athan and Abergavenny with places such as Blackwood, Langstone, Maesteg and Trehafod to follow shortly with homes and businesses having access to fibre to the premises for the very first time.

**Northern Ireland:** The £165 million contract for delivery of the Project Stratum broadband intervention scheme was awarded to Fibrus Networks Ltd in November 2020. In January 2022 additional funding of £32m[10] was secured from the Department for Science, Innovation and Technology (DSIT), the Department for the Economy (DfE) and the Department of Agriculture, Environment and Rural Affairs (DAERA) to bring a further 8,500 premises into the scope of the project. The additional premises include 2,500 harder-to-reach properties that were out of scope of the original contract, plus a further 6,000 premises.

The roll-out of the new full-fibre network to reach all 85,000 premises, including the additional 8,500 premises, will continue across four extended quarters of network build, with Fibrus Networks expected to complete full deployment by March 2025. Fibrus has already delivered new infrastructure to 46,000 premises.[11]

## Data collection and reporting

We continue to collect coverage data from a number of operators to improve the accuracy of the data we publish; data from 24 FWA providers (WISPs and MNOs) and 59 fixed line operators was used in the compilation of this report. We also continue to gather coverage data every four months and usage information once a year.

We are in the process of collecting and analysing planned network build information from communications providers in the UK and we shall be publishing the results of this activity in due course.

[9] Welsh Government, Update on Digital Connectivity in Wales, 8 July 2022.
[10] Department for the Economy, Project Stratum extends coverage plans to additional 8,500 premises, 17 January 2022.
[11] Department for the Economy, Project Stratum reaches halfway mark with full fibre broadband roll out, 25 October 2022.

# 2. Fixed broadband coverage for small and medium enterprises

Our reporting on the availability of full-fibre, gigabit-capable and superfast broadband reflects the coverage for residential properties, but access to fast broadband connections is also vital to businesses across the UK.[12] We previously reported on this in our Connected Nations 2021 report, and we plan to provide a further update in our December 2023 report.

Small and medium enterprises (SMEs) access to superfast, full-fibre and gigabit-capable broadband has increased since we last reported on it, but availability is lower than for residential properties.

**Figure 1: SME broadband coverage by size of business**

| Size of business premise | Superfast availability | Full fibre availability | Gigabit-capable availability |
|---|---|---|---|
| **Micro (1-9 employees on site)** | 95% | 43% | 72% |
| **Small (10-49 employees on site)** | 91% | 38% | 60% |
| **Medium (50-249 employees on site)** | 87% | 35% | 56% |

*Source: Ofcom analysis of provider and business data (January 2023)*

Micro business sites (which make up around 90% of all business premises in our analysis), have the highest coverage. This is because micro-business premises are often located in residential areas and can make use of residential services. While our analysis shows that coverage is lower for medium-sized business sites, our network coverage data does not include networks deployed specifically to connect businesses (e.g. we do not gather data on leased line specific networks, nor on enterprise focussed FWA or satellite providers), so these sites may be able to get good connectivity via these alternative services, rather than broadband products.

By nation, England has the greatest availability of superfast broadband for SMEs, while Northern Ireland has the most coverage of full fibre and gigabit-capable. As for residential premises, coverage of superfast, full fibre and gigabit capable is generally better in urban areas than rural areas for all of the Nations – however, this is particularly the case in Scotland.

[12] We have used a database of business premises, provided by CACI, matched to our premises database, for this analysis and our reporting is based on the size of the business premises. Further details on our approach to this analysis is explained in Annex 1.

**Figure 2: SME broadband coverage by nation**

| | Superfast availability | | | Full fibre | | | Gigabit-capable | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | Urban | Rural | Total | Urban | Rural | Total | Urban | Rural |
| **England** | 95% | 96% | 84% | 42% | 43% | 37% | 72% | 76% | 40% |
| **Northern Ireland** | 93% | 98% | 85% | 79% | 84% | 70% | 83% | 90% | 70% |
| **Scotland** | 91% | 96% | 70% | 37% | 40% | 22% | 60% | 68% | 24% |
| **Wales** | 92% | 97% | 78% | 43% | 45% | 36% | 52% | 58% | 37% |
| **UK** | **95%** | **96%** | **82%** | **43%** | **44%** | **38%** | **70%** | **75%** | **40%** |

*Source: Ofcom analysis of provider and business data (January 2023)*

# 3. Dashboards

## Fixed broadband

| Access to full fibre | May 2022 | September 2022 | January 2023 |
|---|---|---|---|
| UK | 37% | 42% | 48% |
| England | 36% | 41% | 47% |
| Northern Ireland | 83% | 85% | 89% |
| Scotland | 36% | 41% | 46% |
| Wales | 36% | 40% | 45% |

| Access to gigabit-capable services | May 2022 | September 2022 | January 2023 |
|---|---|---|---|
| UK | 68% | 70% | 73% |
| England | 69% | 71% | 75% |
| Northern Ireland | 85% | 87% | 90% |
| Scotland | 63% | 64% | 68% |
| Wales | 49% | 52% | 57% |

| Access to superfast services | May 2022 | September 2022 | January 2023 |
|---|---|---|---|
| UK | 96% | 97% | 97% |
| England | 97% | 97% | 97% |
| Northern Ireland | 93% | 94% | 96% |
| Scotland | 94% | 94% | 95% |
| Wales | 95% | 95% | 96% |

| Access to at least 10 Mbit/s services | May 2022 | September 2022 | January 2023 |
|---|---|---|---|
| UK | 99% | 99% | 99% |
| England | 99% | 99% | 99% |
| Northern Ireland | 96% | 97% | 98% |
| Scotland | 97% | 97% | 98% |
| Wales | 98% | 98% | 98% |

## Fixed Wireless Access

Since our last update we have continued to collect data for Wireless Internet Service Providers (WISPs) providing a Fixed Wireless Access broadband service. The following shows premises, both residential and commercial, where decent broadband is obtainable via FWA.

| Fixed Wireless | May 2022 | September 2022 | January 2023 |
|---|---|---|---|
| UK Mobile Network Operators (MNO) | 95% | 95% | 95% |
| UK Wireless Internet Service Providers (WISP) | 7% | 7% | 7% |

## USO eligibility

The percentage of homes and businesses unable to access a decent broadband service, that is at least 10 Mbit/s download speed and at least 1 Mbit/s upload speed.

| Unable to receive 10 Mbit/s download and 1 Mbit/s upload services (potentially USO-eligible) | May 2022 | September 2022 | January 2023 |
|---|---|---|---|
| UK | 0.3% | 0.3% | 0.2% |
| England | 0.2% | 0.1% | 0.1% |
| Northern Ireland | 1.2% | 1.0% | 0.6% |
| Scotland | 0.8% | 0.7% | 0.7% |
| Wales | 0.6% | 0.6% | 0.6% |

*Note 1: We consider a property to have "full fibre coverage" only if:*

1. *fibre is deployed in close proximity to the premises, so only a dedicated fibre connection to the property is necessary to provide (end-to-end) fibre connectivity; and*
2. *the end user would expect to pay only a published pre-agreed connection charge, if one was to be imposed.*

*Note 2: This may exclude broadband services available from some smaller providers.*

*Note 3: Figures for potential USO eligibility are for all (both residential and commercial) properties. Figures for other speeds refer to residential properties only.*

## 5G coverage

| Premises (outdoor) covered by at least one operator | May 2022 | September 2022 | January 2023 |
|---|---|---|---|
| **UK** | 48-64% | 67-78% | 73-82% |
| **England** | 51-67% | 70-81% | 76-85% |
| **Northern Ireland** | 24-34% | 37-44% | 48-55% |
| **Scotland** | 43-57% | 57-68% | 62-73% |
| **Wales** | 29-42% | 46-58% | 49-61% |

| Premises (outdoor) covered by all operators | May 2022 | September 2022 | January 2023 |
|---|---|---|---|
| **UK** | 5-12% | 11-20% | 12-22% |
| **England** | 5-13% | 12-22% | 13-23% |
| **Northern Ireland** | 2-6% | 4-8% | 5-12% |
| **Scotland** | 2-10% | 6-15% | 7-17% |
| **Wales** | 2-6% | 4-7% | 5-8% |

*Note 4: Thresholds for 5G Service are -110 dBm where we have high confidence in coverage and -100 dBm where we have very high confidence in coverage. Validation work on new 5G predictions remains ongoing.*

## 4G coverage

| Premises (outdoor) – coverage range across MNOs | May 2022 | September 2022 | January 2023 |
|---|---|---|---|
| UK | 99-c.100% | 99-c.100% | 99-c.100% |
| England | 99-c.100% | 99-c.100% | 99-c.100% |
| Northern Ireland | 97-99% | 98-99% | 97-99% |
| Scotland | 97-99% | 97-99% | 97-99% |
| Wales | 96-99% | 96-99% | 96-99% |

*Note 5: All reported coverage is based on predictions, which the operators continue to update. Consequently, the coverage of mobile services reported may vary due to the models used or the underlying geographic and/or premises information. In some cases, due to reporting of coverage at whole percentages, small changes can result in 1 percentage point changes in reported coverage. The [Connected Nations 2022 methodology] provides more details on how mobile coverage is calculated.*

| Geographic area – coverage range across MNOs | May 2022 | September 2022 | January 2023 |
|---|---|---|---|
| UK | 79-87% | 80-87% | 80-87% |
| England | 92-94% | 92-94% | 92-94% |
| Northern Ireland | 88-92% | 88-92% | 88-92% |
| Scotland | 57-74% | 57-75% | 57-75% |
| Wales | 72-85% | 73-85% | 74-85% |

| Geographic area not covered by any operator (not-spots) | May 2022 | September 2022 | January 2023 |
|---|---|---|---|
| UK | 8% | 8% | 8% |
| England | 2% | 2% | 2% |
| Northern Ireland | 3% | 3% | 3% |
| Scotland | 17% | 17% | 17% |
| Wales | 10% | 10% | 9% |

| Coverage of all roads (in vehicle) – coverage range across MNOs | May 2022 | September 2022 | January 2023 |
|---|---|---|---|
| UK | 78-84% | 79-84% | 80-85% |
| England | 84-88% | 85-88% | 85-89% |
| Northern Ireland | 69-80% | 69-79% | 69-80% |
| Scotland | 65-79% | 65-79% | 66-79% |
| Wales | 70-79% | 70-80% | 71-80% |

| All roads (in vehicle) not covered by any operator (not-spots) | May 2022 | September 2022 | January 2023 |
|---|---|---|---|
| UK | 4% | 4% | 4% |
| England | 2% | 2% | 2% |
| Northern Ireland | 6% | 6% | 6% |
| Scotland | 7% | 7% | 7% |
| Wales | 9% | 9% | 9% |

*Note 6: Thresholds for 4G, in-vehicle, services: (-95dBm).*

## Voice and text coverage

| Premises (outdoor) – coverage range across MNOs | May 2022 | September 2022 | January 2023 |
|---|---|---|---|
| UK | 99-c.100% | 99-c.100% | c.100% |
| England | c.100% | c.100% | c.100% |
| Northern Ireland | 98-c.100% | 98-c.100% | 98-c.100% |
| Scotland | 99-c.100% | 99-c.100% | 99-c.100% |
| Wales | 99% | 99-c.100% | 99% |

| Geographic area – coverage range across MNOs | May 2022 | September 2022 | January 2023 |
|---|---|---|---|
| UK | 85-92% | 85-93% | 85-93% |
| England | 95-98% | 95-99% | 95-98% |
| Northern Ireland | 89-98% | 89-98% | 89-98% |
| Scotland | 68-82% | 68-84% | 68-83% |
| Wales | 86-91% | 86-94% | 86-92% |

| Geographic area not covered by any operator (not-spots) | May 2022 | September 2022 | January 2023 |
|---|---|---|---|
| UK | 4% | 4% | 4% |
| England | 1% | 1% | 1% |
| Northern Ireland | 1% | 1% | 1% |
| Scotland | 11% | 10% | 10% |
| Wales | 5% | 4% | 4% |

| Coverage of all roads (in vehicle) – coverage range across MNOs | May 2022 | September 2022 | January 2023 |
|---|---|---|---|
| UK | 87-95% | 87-96% | 87-95% |
| England | 90-98% | 90-99% | 91-98% |
| Northern Ireland | 73-94% | 73-96% | 73-95% |
| Scotland | 77-88% | 77-90% | 78-89% |
| Wales | 82-88% | 83-91% | 83-89% |

| All roads (in vehicle) not covered by any operator (not-spots) | May 2022 | September 2022 | January 2023 |
|---|---|---|---|
| UK | 2% | 1% | 2% |
| England | 1% | c.0% | 1% |
| Northern Ireland | 3% | 2% | 3% |
| Scotland | 3% | 3% | 3% |
| Wales | 5% | 4% | 5% |

*Note 7: Voice and text figures above are subject to further checking and confirmation.*

*Note 8: Thresholds for, in-vehicle, voice and text are: 2G (-71dBm), 3G (-90dBm), 4G (-95dBm).*

# A1. Business analysis methodology

## Coverage for business enterprises

A1.1 Where we report on the availability of broadband services for small and medium enterprises (SMEs), we have used an address match process to link our Connected Nations premise base[13] to a business classification system, the Dun and Bradstreet Business Universe. This data set provides 3.4 million records across classes of business, including agricultural, construction, financial, food, clothing, footwear, hotels, restaurants, pubs, local service, manufacturer, recreation, cultural, sporting activity, transport, motor, fuel and wholesale business locations. The data set is used subject to the following attributions:

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A1.2 We linked 2.8 million (82%) records from this data set using building, or street, and postcode identification to records in the Ordnance Survey AddressBase[14] to identify the Unique Property Reference Number (UPRN) for each business record. A further 585,000 (17%) could only be matched to postcodes, and 35,000 (1%) records could not be matched.

A1.3 Due to the reliance on building, or street, and postcode identification, there is ambiguity in the matching process. We undertook further analysis to remove business records where we were not confident in the matching result. Finally, we constrained the analysis to the 2.12 million records that are within our Connected Nations premise base.

A1.4 The definition of small and medium enterprises is based on the number of employees at the specific site. The categories of SME are:

- Micro: Sole trader and fewer than 10 employees.
- Small: 10 to fewer than 50 employees.
- Medium: 50 to fewer than 250 employees.

A1.5 It should be noted that our coverage data does not include networks deployed specifically to connect businesses (in particular, we do not gather data on leased lines specific networks), and so these business sites may be able to get good connectivity, albeit via leased lines rather than broadband products.

[13] The Connected Nations 2022 methodology explains how we identify, include and categorise properties to construct our premise base.

[14] The addressing products used for the Spring 2023 update are the OS AddressBase Premium Epoch 98 and OS AddressBase Islands Epoch 98.