



From mountain to sea

Digital Engagement Team Presentation to Torphins CC

2nd May 2024

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From mountain to sea

The Digital Engagement Team

- Live in November 2021
- Funded through the Aberdeen City Region Deal (CRD)
- Created within the Digital workstream of the CRD
- Working across Aberdeen City and Aberdeenshire

- Our Remit:
 - **Stimulate demand in programmes and voucher schemes**
 - **Engage with communities for aggregation**
 - **Work with stakeholders and funders**
 - **Support residents, businesses and communities in matters relating to digital connectivity**

ABERDEEN CITY REGION DEAL: Powering Tomorrow's World



Aberdeenshire
COUNCIL 



#ABZdeal

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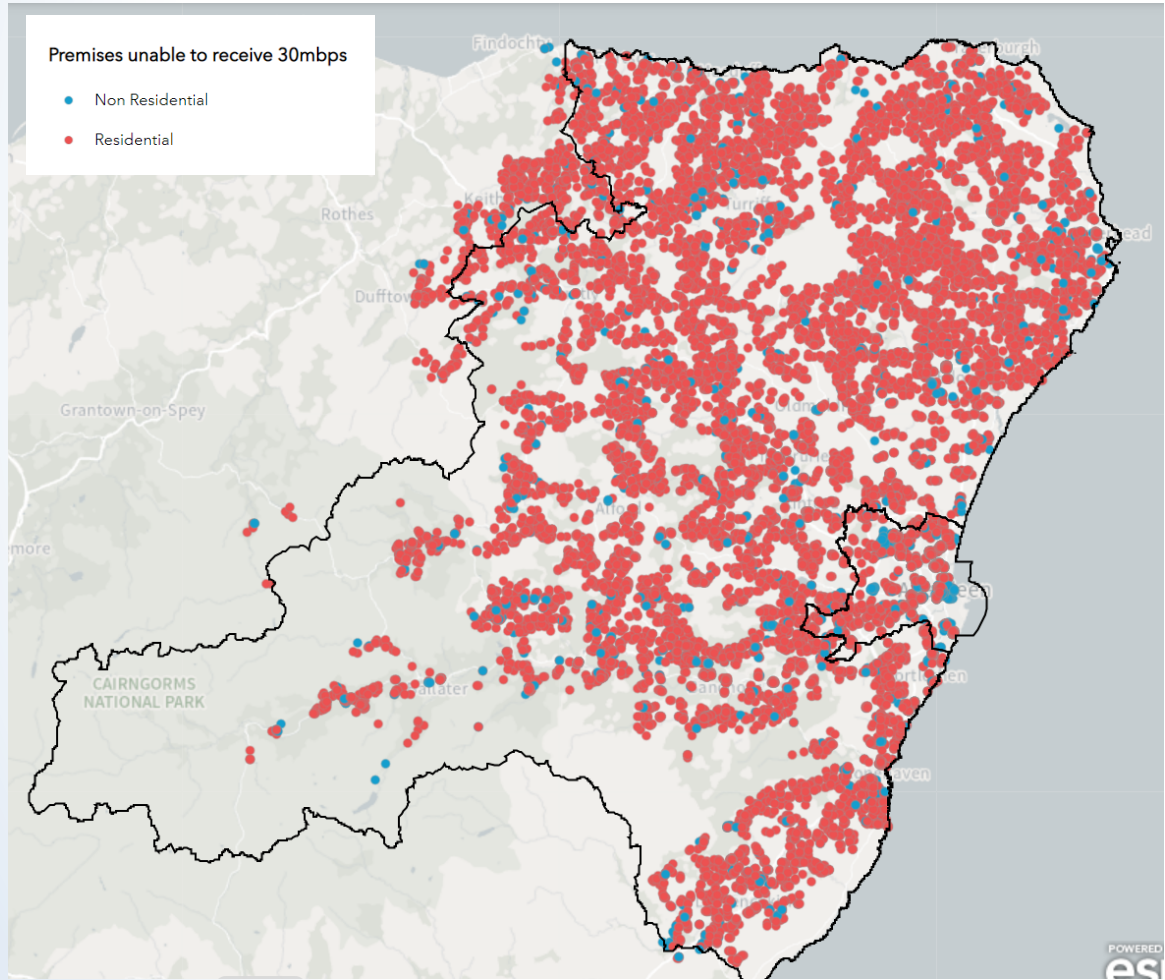
Email: digitalengagement@aberdeenshire.gov.uk

Landing Page: www.aberdeenshire.gov.uk/business/support-and-advice/communities/Digital-Connectivity/



From mountain to sea

Aberdeenshire's Current Connectivity Landscape - Superfast Broadband Availability (30Mbps +)



Superfast Broadband is defined by International Standards as download speeds of 30Mbps, and is widely understood as being the minimum speed to live digitally in the modern world.

Ofcom's Connected Nations Spring Update was published on 20/05/2022 with the most up-to-date data, provided to Ofcom by Telecoms Operators.

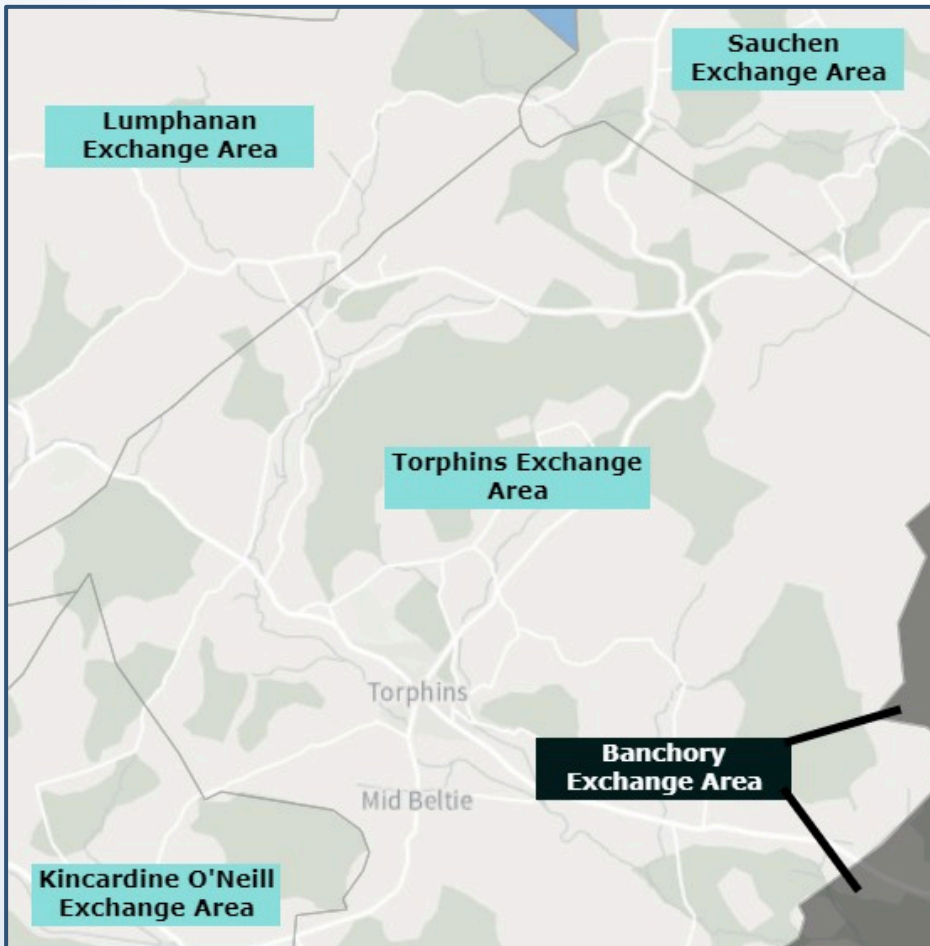
| Measure | Value / Number |
|-----------------------------|----------------|
| # Premises in Aberdeenshire | 128,662 |
| # Premises with SFBB | 110,870 |
| % Premises with SFBB | 86.2% |
| # Premises without SFBB | 17,792 |
| % Premises without SFBB | 13.8% |

Aberdeenshire is ranked 26th out of the 32 LA areas in Scotland, in Superfast Connectivity.

In addition, Ofcom's data shows that 9,637 premises (7.5%) in Aberdeenshire cannot obtain speeds of at least 10Mbps, with 2,217 premises (1.7%) unable to obtain even 2Mbps speeds.

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Commercial Broadband Expansion



Aberdeenshire only has one wholesale broadband network provider – Openreach.

Other wholesale Fibre operators (Virgin Media; Borderlink; Axione; CityFibre; Hyperoptic etc) do not have any spine infrastructure in Aberdeenshire, making any commercial deployment highly unlikely.

Openreach's current commercial plans for full-fibre expansion is called 'Fibre First,' and targets Market Town exchanges, with commercial improvements expected in Aberdeenshire by April 2026.

The map on the left shows the telephone exchange areas present in and around the Torphins CC area. The darker highlighted area represents Banchory Telephone Exchange, which is the only local exchange included in the Fibre First programme.

Torphins Exchange, Lumphanan Exchange, Sauchen Exchange and Kincardine O'Neill Exchange are **not** included in planned commercial upgrade at exchange level.



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Reaching 100% (R100) – Scottish Government’s Superfast Broadband Programme

The Reaching 100% commitment

The R100 project commits to providing access to Superfast Broadband to 100% of homes and business in Scotland. The R100 programme aims to close the gaps left by the previous Digital Scotland Superfast Broadband (DSSB) programme, by targeting the most rural premises first. The commitments of R100 will be achieved through three strands of activity:

- **R100 Contracts** – **BT**, and their supply partner **Openreach**, were the successful contractor, funded to deploy full-fibre infrastructure as part of the R100 programme. This will directly benefit nearly **16,000** properties in Aberdeenshire.
- **Commercial Coverage Contracts** – Scottish Government are committed to working closely with National Telecoms Operators, to encourage further commercial expansion across Scotland, and to monitor closely all connectivity work being completed. This work aims to benefit over **2,000** additional properties in Aberdeenshire.
- **Scottish Broadband Voucher Scheme (SBVS)** – Over **6,000** properties in Aberdeenshire will not benefit from the other two work streams. For these properties, support is made available to residents to obtain an alternative superfast broadband solution, through a **£5,000** voucher subsidy.

The R100 [online postcode tracker](#) is live now:

www.scotlandsuperfast.com

*Decent Broadband (USO) =
> 10 Mbps*

**Superfast Broadband =
> 30 Mbps**

*Ultrafast Broadband =
> 300 Mbps*

*Gigabit Broadband =
> 1Gbps / > 1000Mbps*

Check you broadband speeds on
www.broadbandspeedchecker.co.uk

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Torphins CC Area – Connectivity Statistics

TOTAL NUMBER OF PREMISES IDENTIFIED IN TORPHINS CC AREA **873**

| Category | # of Prens | % of Prens | Comments |
|---|------------|------------|--|
| Premises with access to Full-Fibre Broadband (1000Mbps +) | 19 | 2.2% | <i>Two pockets of FTTP in Torphins Exchange area</i> |
| Premises with access to Superfast Broadband (30Mbps +) | 574 | 65.8% | <i>These premises are all connected to Torphins exchange</i> |
| Premises without access to superfast broadband (30Mbps) as a minimum | 270 | 31.5% | <i>Majority connected to Torphins, and some to Lumphanan</i> |
| Premises with no existing fixed broadband connection | 5 | 0.6% | <i>Various reasons</i> |

Premises without access to superfast broadband **270**

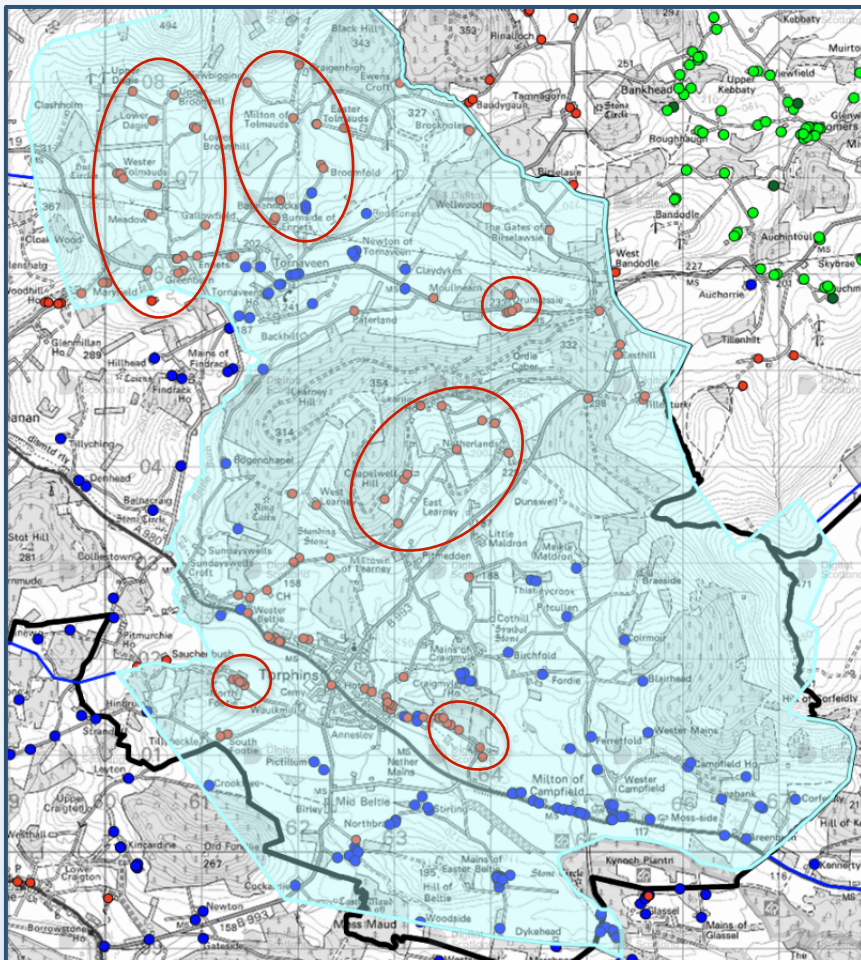
| Category | # of Prens | % of Prens | Comments |
|--|------------|------------|--|
| Premises which will be connected to FTTP through R100 in 2027 | 117 | 43.3% | <i>Tornaveen, Torphins and Campfield</i> |
| Premises eligible for R100 Scottish Broadband Voucher Scheme | 111 | 41.1% | <i>Mixture of new build premises and out-of-scope premises</i> |
| Premises in scope for commercial upgrade to FTTP | 19 | 7.0% | <i>Alongside planned R100 rollout locations</i> |
| Premises currently ineligible for support | 23 | 8.5% | <i>Various reasons</i> |

For the **Torphins CC Area**, the Reaching 100% (R100) Programme and associated Scottish Broadband Voucher Scheme (SBVS), looks like the following:

- **0** premises have already been connected to full-fibre FTTP broadband through the R100 programme.
- **117** premises will be connected to full-fibre in **2027** through the R100 programme.
- **111** premises are eligible to utilise the **Scottish Broadband Voucher Scheme**
- **8** premises have already *used* the SBVS vouchers – giving an uptake rate of **6.8%**
- **19** premises will be upgraded to FTTP through commercial ‘overspill’ from R100 contract
- **23** premises are currently not eligible for SBVS, but should be according to data – they can appeal to join the scheme

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R100 SBVS – Further Analysis



The **Blue** dots represent premises included in R100 programme, and will be upgraded to full-fibre broadband connections in 2027.

The **Red** dots represent premises **not** included in any commercial or publicly funded build plans, and are therefore eligible for the Scottish Broadband Voucher Scheme (SBVS)

Each premise in this category is eligible to utilise a grant subsidy up to the value of **£5,000** per premise, to cover the installation costs of a broadband solution which must guarantee a minimum of 30Mbps speeds.

Although some of the SBVS eligible properties are rural and remote, and would need a standalone, single solution, possible clusters have been identified, that would benefit from a shared solution, and so would benefit from a community support approach. Further discussion, analysis and planning on this should be done.

Solutions for these premises could be Enhanced 4G solutions (4GLTE), Fixed Wireless Access solutions (FWA), Satellite Broadband solutions, or Community Fibre Projects (FTTPOD).

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Fibre Broadband Technologies

Fibre-to-the-Cabinet (FTTC)

The most common current broadband infrastructure across Scotland. Primarily expanded through the Digital Scotland Superfast Broadband (DSSB) Programme.

For residents within 600m of a Fibre Cabinet = Good connectivity up to 80Mbps

Beyond 600m, broadband speeds will degrade over distance

Copper cable may be served via overhead cable, underground ducting, or 'self-buried' cabling.



Fibre-to-the-Property (FTTP) / Full-Fibre

Full Fibre Broadband, means fibre-optic cable directly to the premises (FTTP)

Future-proof for speeds (> 1Gbps speeds possible)
Very low-latency connection – wider bandwidth
Monthly subscription costs can be very low / open competition
Unlimited data downloads common

Time-consuming and expensive to install (requires installation of new cabling). Must be served via insulated ducting, or via overhead cable.



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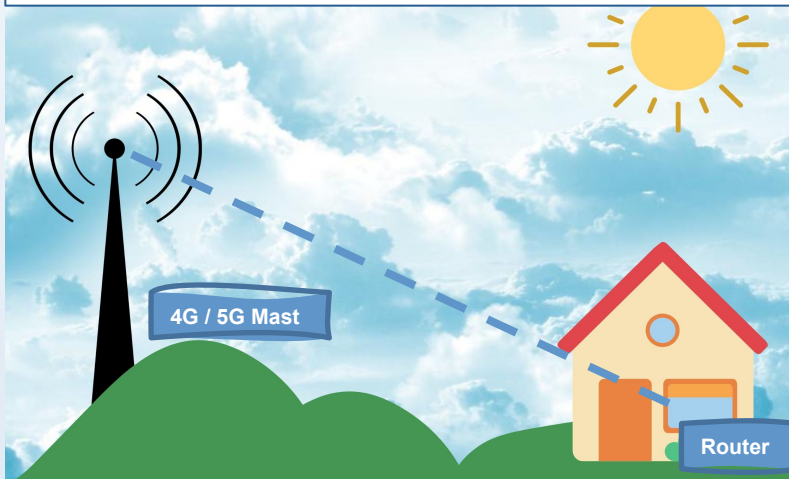
Alternative Broadband Solutions

Mobile Broadband

Provides high-speed internet using current mobile (4G / 5G) coverage
Uses existing network of mobile masts

Portable option – can be used anywhere there is signal
Same-day activation (little to no installation)
Low-cost subscription rates

Higher latency connections
Shared connection, affected by area usage
Reliant on mobile coverage
4G coverage unlikely to achieve speeds beyond Superfast
5G rollout to rural areas currently not planned

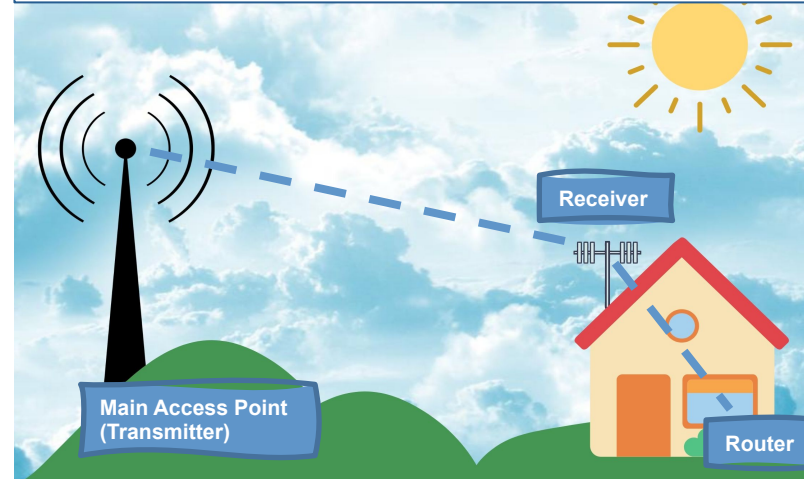


Fixed Wireless Broadband

Provides high-speed internet access using radio signals
Uses transmission masts or poles to send out the radio waves to the local area

Low-latency connections
Quick & easy installation
Dedicated connections
Local Operators

Requires line-of-sight between the mast and the premise
Affected by the landscape
Higher monthly rates

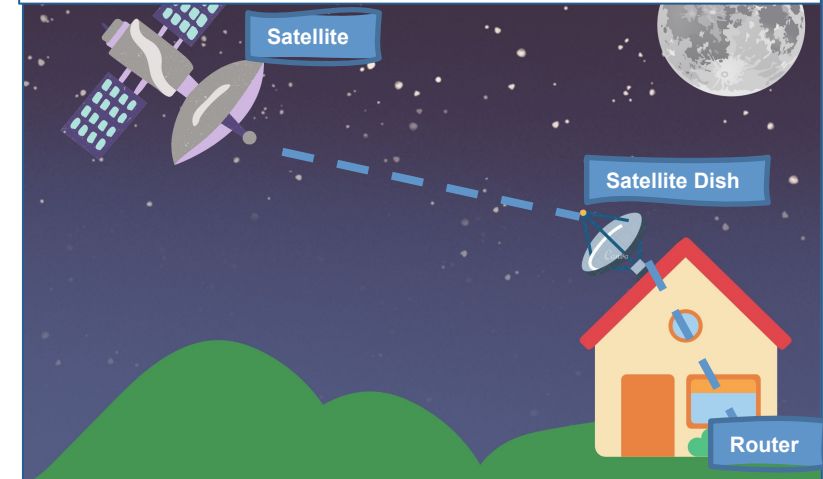


Satellite Broadband

Provides high-speed internet using satellite networks
Broadband signal transmitted from space, and picked up by satellite receiver on property

Available everywhere – not affected by landscape or geography
Quick installation
Stable connections

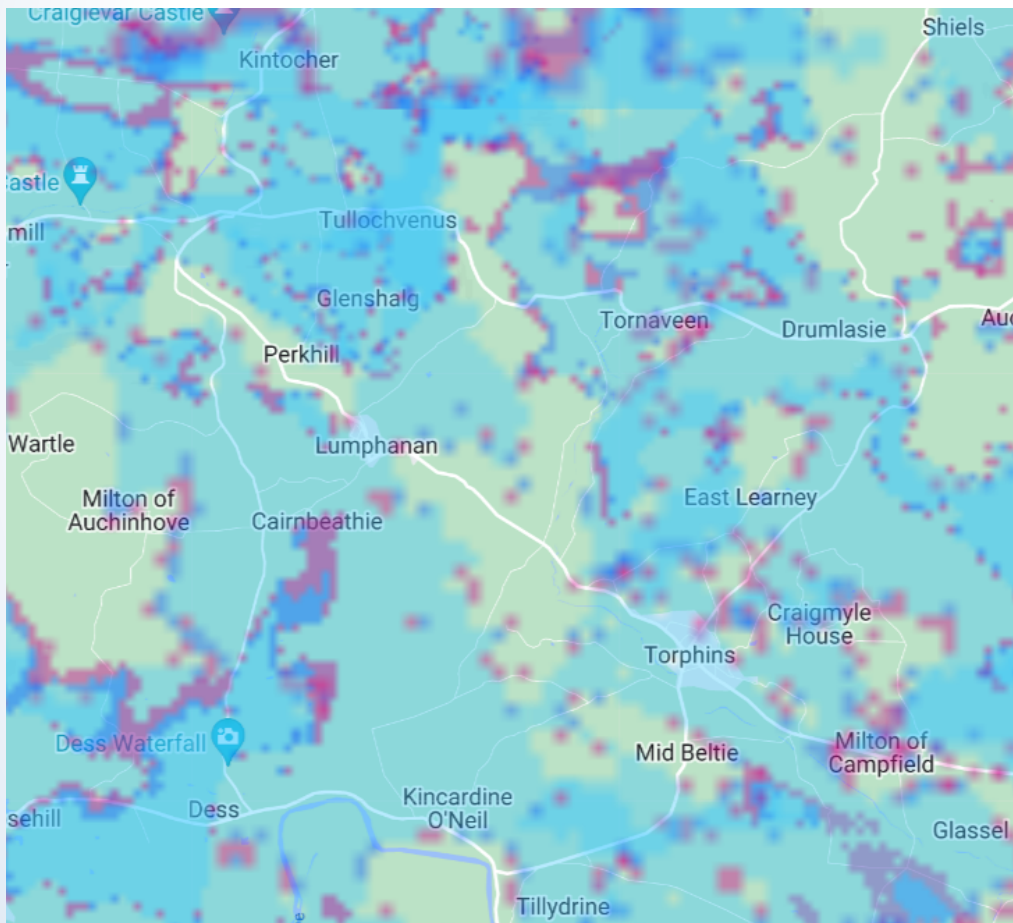
Higher latency service (due to distance of transmission)
Higher cost subscription rates
Priority data instead of data caps





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Fixed Wireless Access (FWA) Coverage



There are currently 2 FWA providers with existing coverage in the Torphins CC area.

Scot-Tel-Gould
(map to the left)

**Converged Rural
Broadband
(formerly
Caleycom)**
(map to the right)





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Project Gigabit

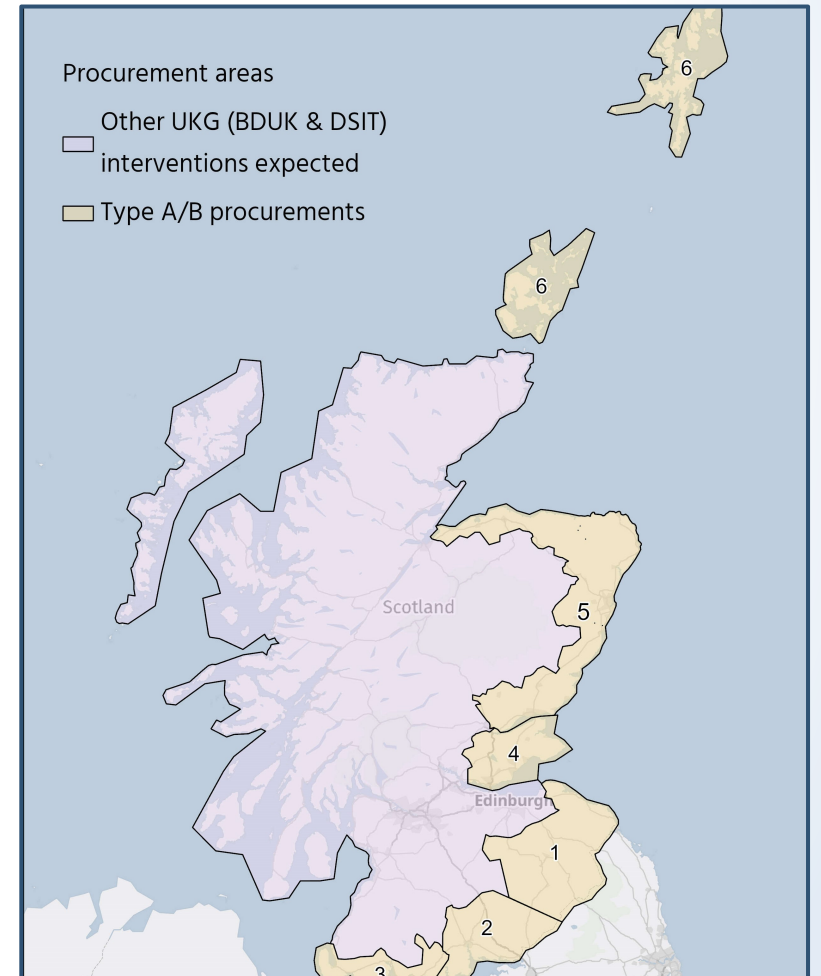
UK Government's Department for Science Innovation & Technology (DSIT) manage the delivery of **Project Gigabit**, a UK wide programme of infrastructure support to create ***gigabit*** capable connectivity across the whole of the UK.

In Scotland, ongoing work between UK and Scottish Governments, is looking to determine the right approach to subsidise further investment in full-fibre infrastructure to premises missed by the R100 programme, and to those premises with access to superfast broadband, but no plans for upgrade to gigabit (i.e. full-fibre).

Initial announcements at the end of December 2023, provided some information on proposed procurement lots (map attached), which include parts of Aberdeenshire. This could move forward to a procurement process to fund an operator, or consortium of operators, to build significant amounts of full-fibre in the proposed procurement area.

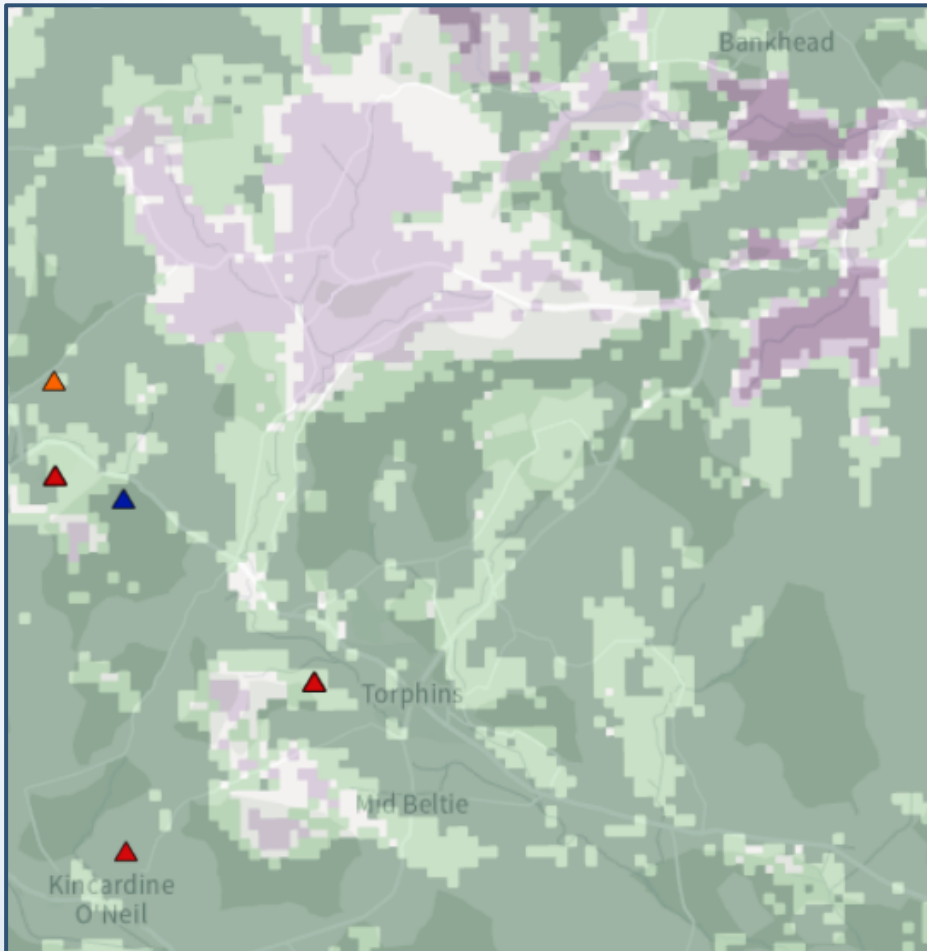
Premises outwith the proposed procurement lot, but still in need of support to get gigabit capable connections, will be made eligible for the Gigabit Broadband Voucher Scheme (GBVS) worth **£4,500**, to subsidise the costs of a gigabit broadband solution.

The GBVS **can** be used with the SBVS, meaning some premises could have up to **£9,500** of subsidy to get a better broadband solution.



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4G Coverage Expansion – Shared Rural Network (SRN)



Existing 4G coverage in the Torphins CC area is variable, with Vodafone providing more coverage in the south part of the CC including Torphins, and EE being the only provider offering decent coverage at Tornaveen.

The Shared Rural Network is a joint programme between UK Government and all four UK Mobile Network Operators (MNO's), created to tackle the geographic 4G coverage Not-Spots, and improve mobile connectivity across the UK.

For the North East of Scotland, the programme will improve geographic 4G coverage from 86% to 94%, whilst increasing coverage for all 4 MNO's by 20%.

UK Government will fund the erection of new masts where there is no coverage, and the MNO's are committed to expanding their networks by upgrading and improving existing mast sites.

The Shared Rural Network has now completed the procurement processes as part of the build plans, and expect that the MNO's will complete their upgrades by 2025, with UK Government completing the erection of new masts by 2027.





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Our Ask / Q&A

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Email: digitalengagement@aberdeenshire.gov.uk

Landing Page: www.aberdeenshire.gov.uk/business/support-and-advice/communities/Digital-Connectivity/

Q & A

Please feel free to ask any questions you may have