Digital Engagement Team Presentation to NEFDP

6th September 2024

Jack Rigby – Digital Stakeholder Lead Officer

jack.rigby@aberdeenshire.gov.uk

The Digital Engagement Team

- Funded through the Aberdeen City Region Deal (ACRD)
- Created within the Digital workstream of the ACRD
- Working across **Aberdeen City** *and* **Aberdeenshire**

- The Remit:
  - **Stimulate demand in connectivity programmes and voucher schemes**
  - **Support and engage with communities**
  - **Work with stakeholders and funders**
  - **Support residents, businesses and communities in** *all* **matters relating to digital connectivity**

ABERDEEN CITY REGION DEAL:
Powering Tomorrow's World
#ABZdeal

Digital Stakeholder Lead Officer

Jack Rigby
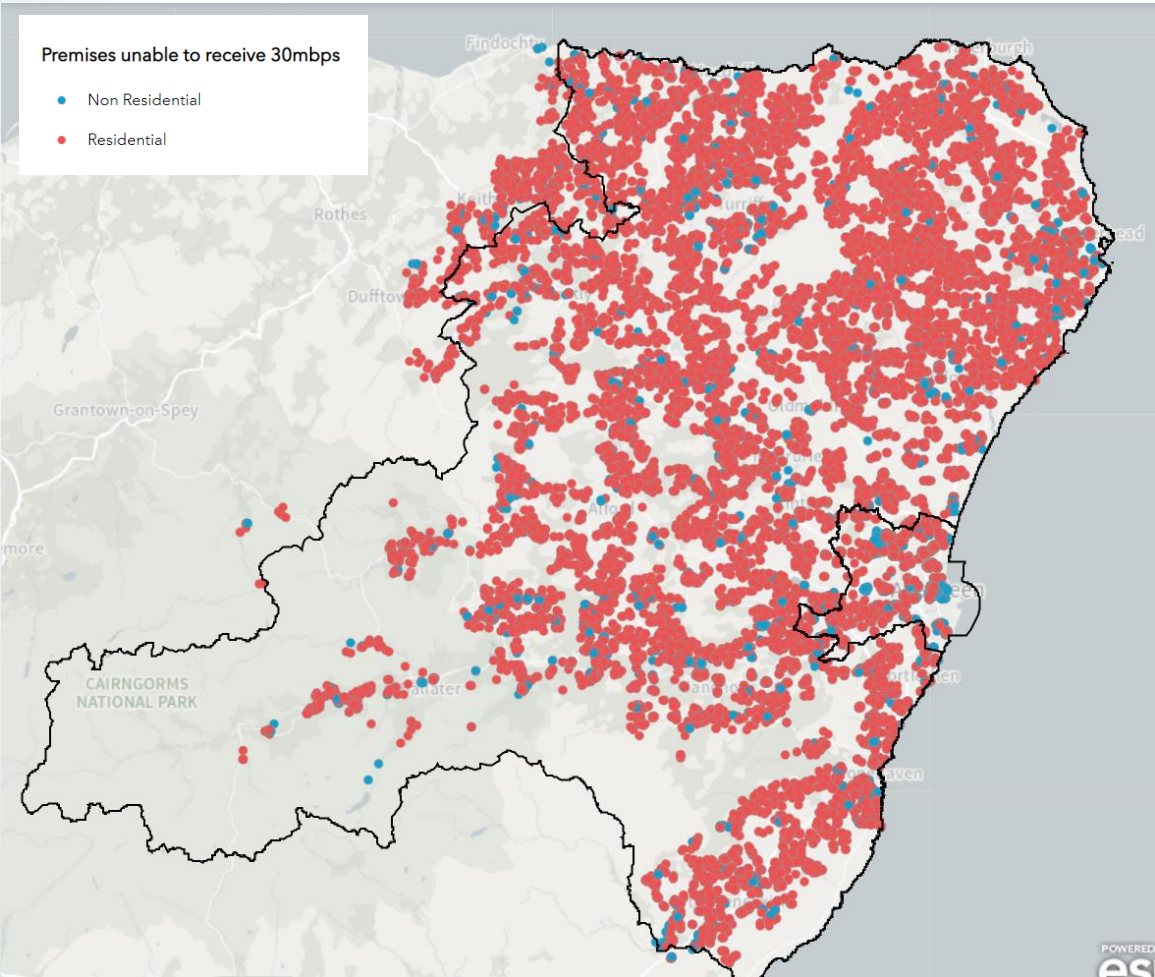jack.rigby@aberdeenshire.gov.uk
01467 469322

Email: digitalengagement@aberdeenshire.gov.uk

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

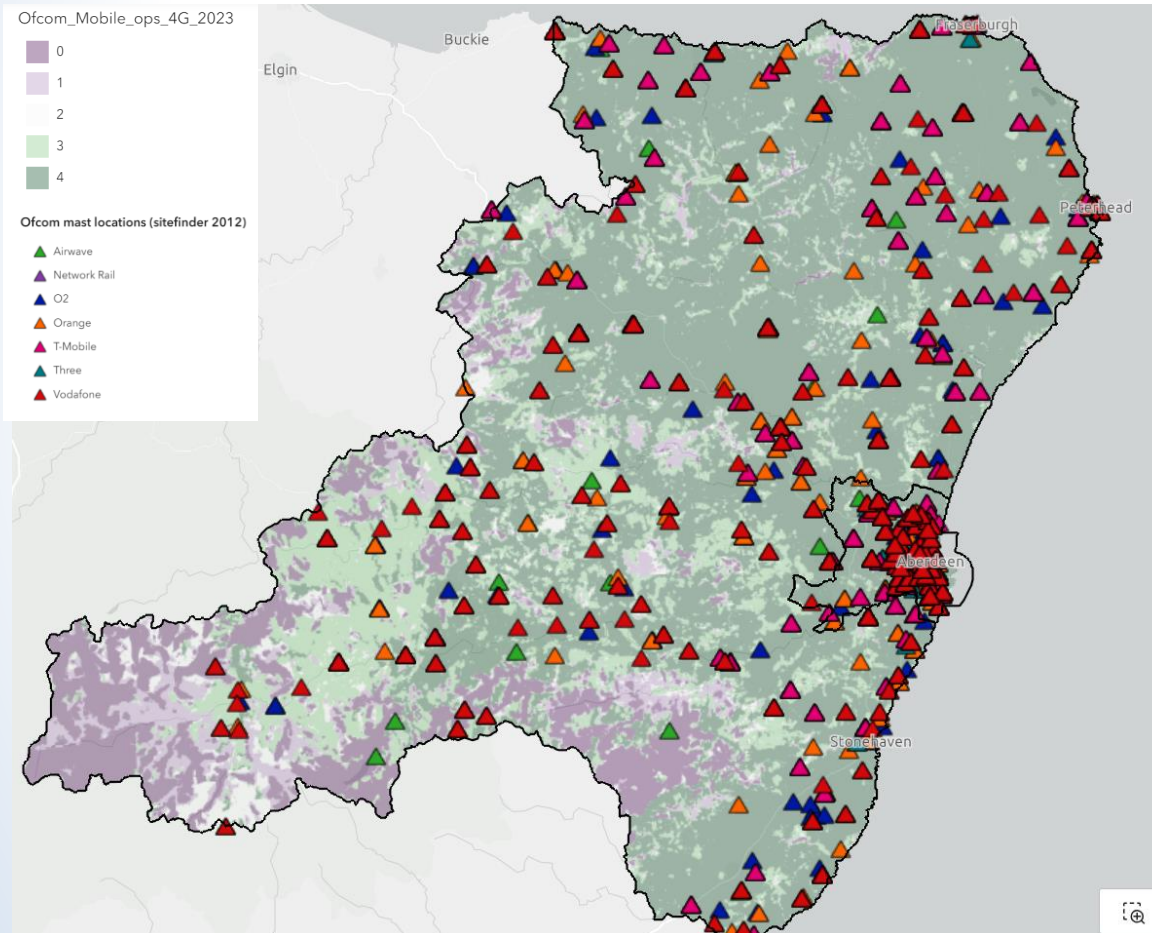# The Current Connectivity Landscape - Fixed Broadband

Fixed Broadband is provided to properties through phonelines, and telephone exchange infrastructure. 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.

Above 'superfast,' premises may be able to access Ultrafast or Gigabit capable connections. Aberdeen City has some of the highest availability of gigabit capable connections in Scotland, whilst Aberdeenshire has some of the worst fixed broadband connectivity in Scotland.

	Aberdeen City	Aberdeenshire
Total # Premises in Aberdeenshire	130,313	128,943
# Premises with Superfast Broadband (30Mbps)	126,767	112,171
% Premises with Superfast Broadband (30Mbps)	97.28%	86.99%
# Premises with Ultrafast Broadband (100Mbps)	115,544	42,147
% Premises with Ultrafast Broadband (100Mbps)	88.67%	32.69%
# Premises with Full-Fibre Broadband (1Gbps)	114,204	41,978
% Premises with Full-Fibre Broadband (1Gbps)	87.64%	32.56%
# Premises unable to receive 30Mbps	3,546	16,772
% Premises unable to receive 30Mbps	2.72%	13.01%
# Premises unable to receive 10Mbps	456	9,237
% Premises unable to receive 10Mbps	0.35%	7.16%
% Premises unable to receive 5Mbps	226	5,140
% Premises unable to receive 5Mbps	0.17%	3.99%

The Current Connectivity Landscape – Mobile Broadband Coverage

Ofcom_Mobile_ops_4G_2023
- 0
- 1
- 2
- 3
- 4

Ofcom mast locations (sitefinder 2012)
- ▲ Airwave
- ▲ Network Rail
- ▲ O2
- ▲ Orange
- ▲ T-Mobile
- ▲ Three
- ▲ Vodafone

Mobile broadband connectivity is provided across the region from the four Mobile Network Operators (MNO's) of the UK: EE; O2; Three; Vodafone.

4G coverage is ubiquitous in Aberdeen City, with 5G coverage almost there in the city. Aberdeenshire's rural areas are underserved, and there are nearly 2,000 premises in Aberdeenshire which do not have mobile connectivity available.

OUTDOOR 4G	Aberdeen City	Aberdeenshire
% of premises with <u>outdoor</u> 4G coverage	100.00%	99.89%
% of premises with <u>outdoor</u> 4G coverage (All MNO's)	99.81%	91.17%
% of premises with *no* <u>outdoor</u> 4G coverage	0.00%	0.11%

INDOOR 4G	Aberdeen City	Aberdeenshire
% of premises with <u>indoor</u> 4G coverage	99.99%	98.55%
% of premises with <u>indoor</u> 4G coverage (All MNO's)	96.55%	68.85%
% of premises with *no* <u>indoor</u> 4G coverage	0.01%	1.45%

OUTDOOR 5G	Aberdeen City	Aberdeenshire
% of premises with outdoor 5G coverage	97.98%	59.42%
% of premises with outdoor 5G coverage (All MNO's)	20.63%	0.00%
% of premises with *no* outdoor 5G coverage	2.02%	40.58%

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**
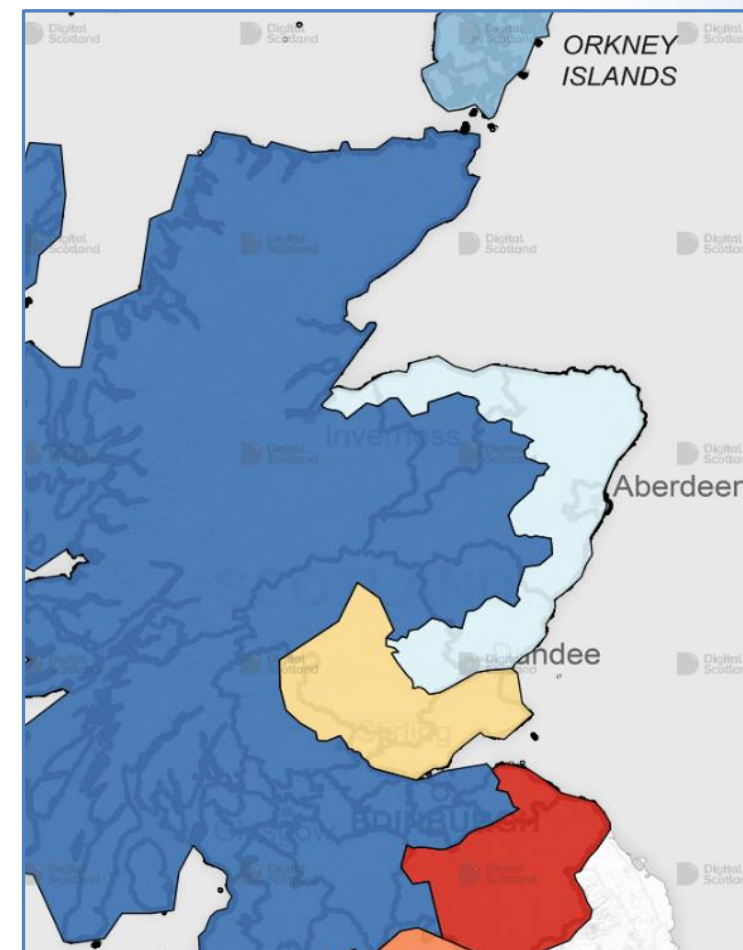
Project Gigabit

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).

Parts of Aberdeenshire have been included in a procurement lot (Lot 5) for Project Gigabit. Procurement will conclude in 2025, to fund an operator, or consortium of operators, to build significant amounts of full-fibre in the proposed procurement area (light blue on the right)

Lot 5 includes 48,914 premises in-scope for subsidised upgrades, with a further 19,518 deferred scope premises. Meaning over **68,000** premises will likely benefit from an anticipated subsidy of nearly **£106m**.

There will also be a 'Very Hard to Reach' policy development, which will provide extra subsidy for the 1% of premises in Scotland which will never be able to receive full-fibre.

Digital Projects – Aberdeen City Region Deal (ACRD)

Digital Connectivity

- **City Network Extension**
  - Expansion of full-fibre infrastructure across Aberdeen City with CityFibre partnership

- **Full-Fibre Infrastructure**
  - Dark-fibre deployment to key public sectors sites across the region

- **Digital Engagement Team**
  - Creation of a team to support stakeholders and stimulate impact from national programmes.

- **Mobile Connectivity Mapping**
  - Project to accurately map mobile connectivity using Aberdeenshire Council waste vehicles

Digital Innovation

- **Port of Aberdeen 5G**
  - Investment to Port of Aberdeen to develop bespoke connectivity solution(s) in the South Harbour

- **S5GC & ONE 5G Pop-up Network**
  - Funding for a mobile 5G network to facilitate the development of 5G use cases in industry

- **Peterhead Port 5G**
  - Investment to Peterhead Port to expand business operations with bespoke connectivity solution(s)

- **SAOS Huntly 5G**
  - Investment to SAOS/ScotEID to develop connectivity solutions in rural Aberdeenshire

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.
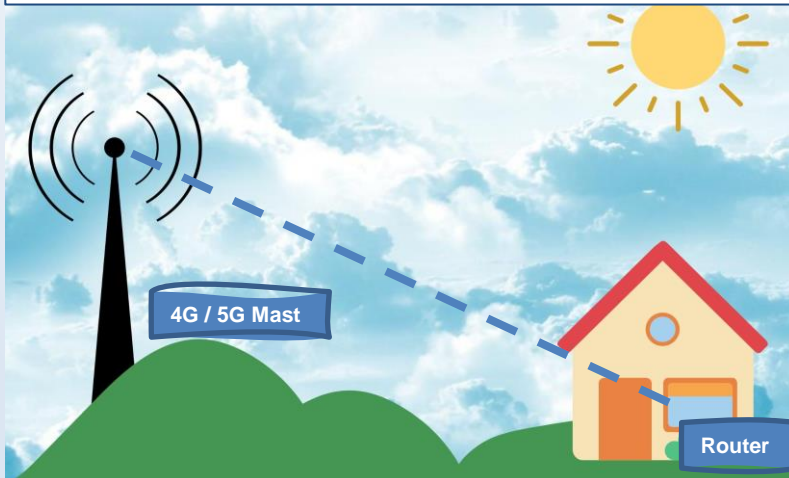
Alternative Broadband Solutions

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
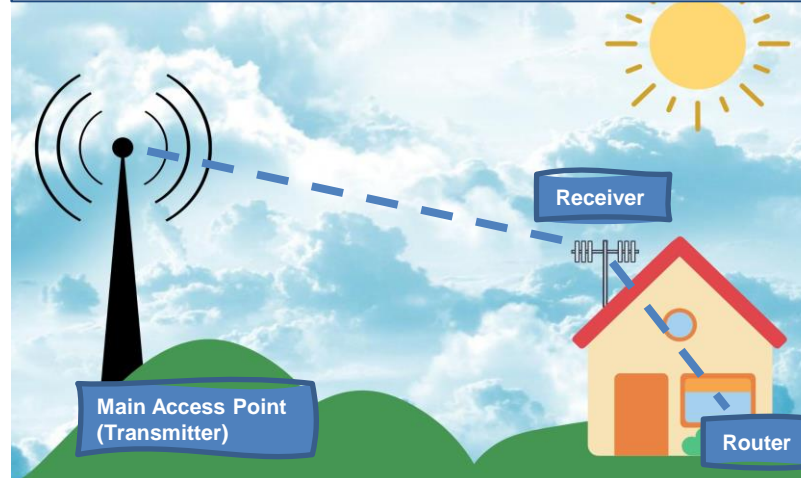5G rollout to rural areas currently not planned

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
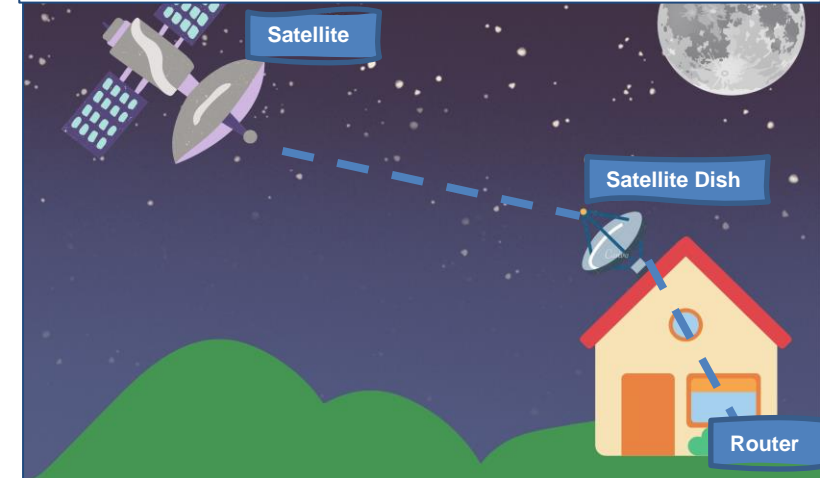Affected by the landscape
Higher monthly rates

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

4G / 5G Mast

Router

Receiver

Main Access Point (Transmitter)

Router

Satellite

Satellite Dish

Router

Our Ask / Q&A

Share information
Spread the word
Signpost to the Digital Engagement Team
Contact us for information & support

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