

Digital Scotland



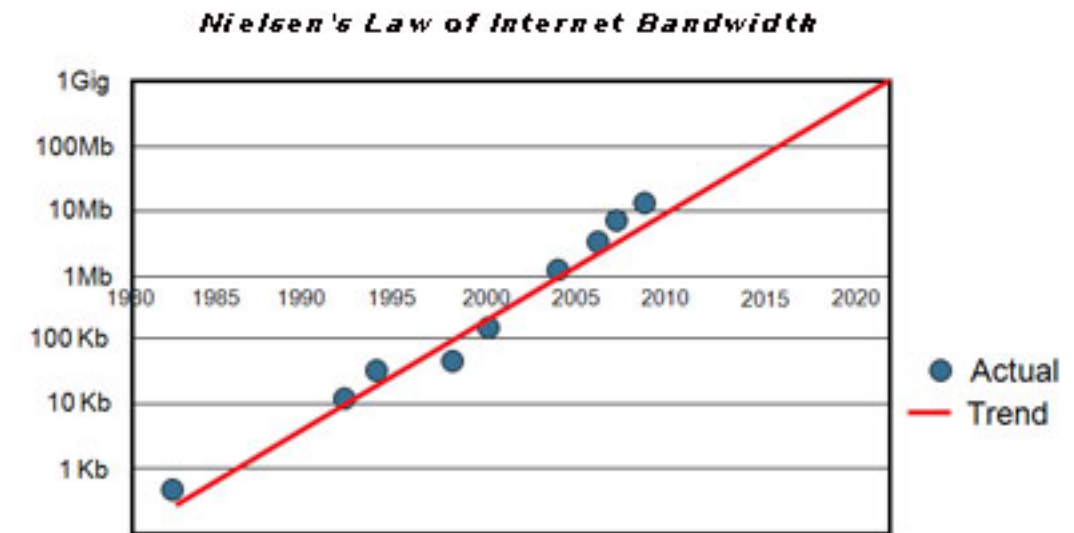
Interim report for consultation

<http://bit.ly/digiscotinterim>

Professor Michael Fourman FRSE

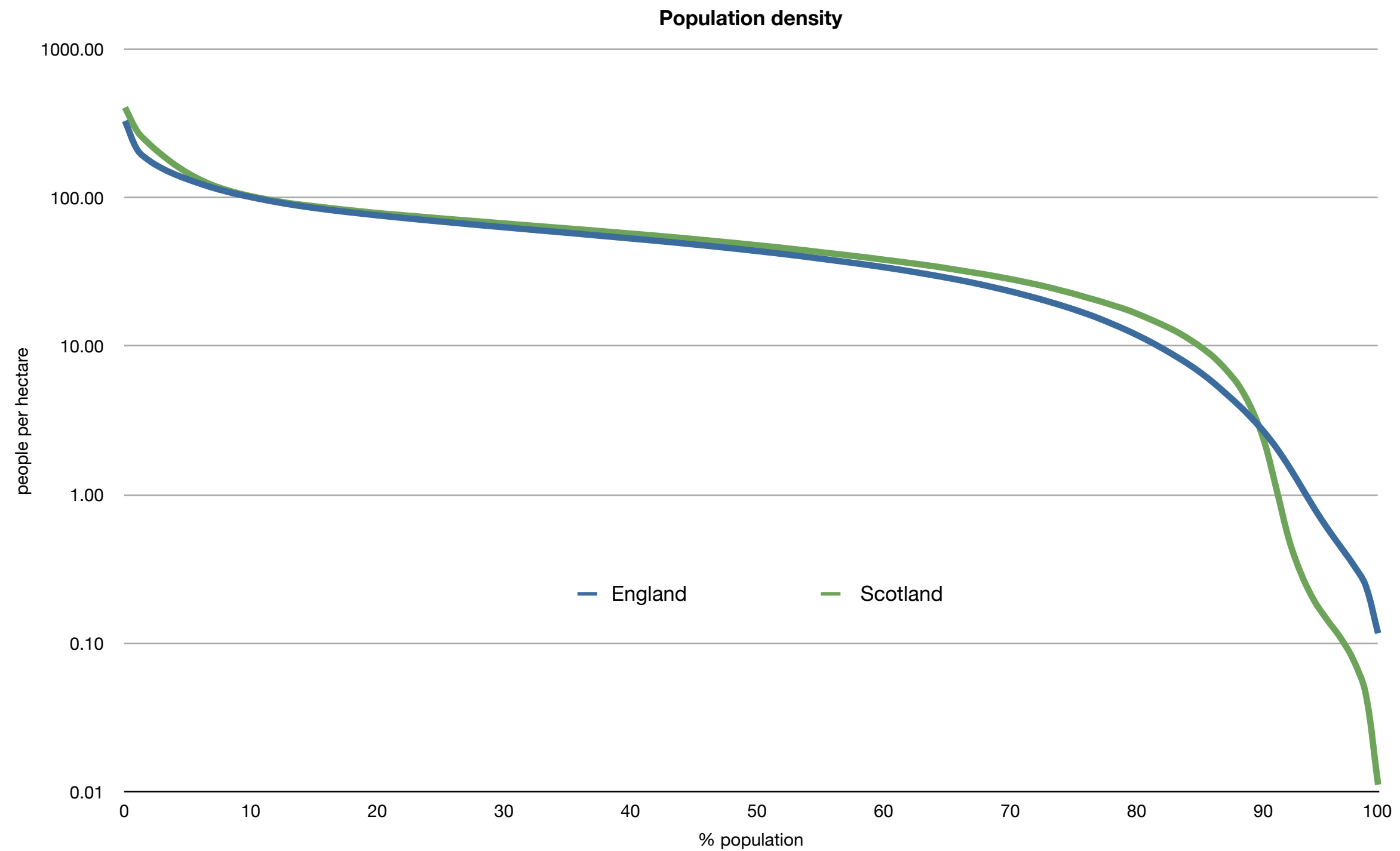
The University of Edinburgh

what speed? x 8 every 5 years



2010	2015	2020	...	2030
0.25 Mb/s	2 Mb/s	16 Mb/s	...	1 Gb/s
2 Mb/s	16 Mb/s	128 Mb/s	...	8 Gb/s ?
16 Mb/s	128 Mb/s	1 Gb/s	...	64 Gb/s ??

Scotland is more densely populated than England (for 90% of inhabitants)



Scotland's population

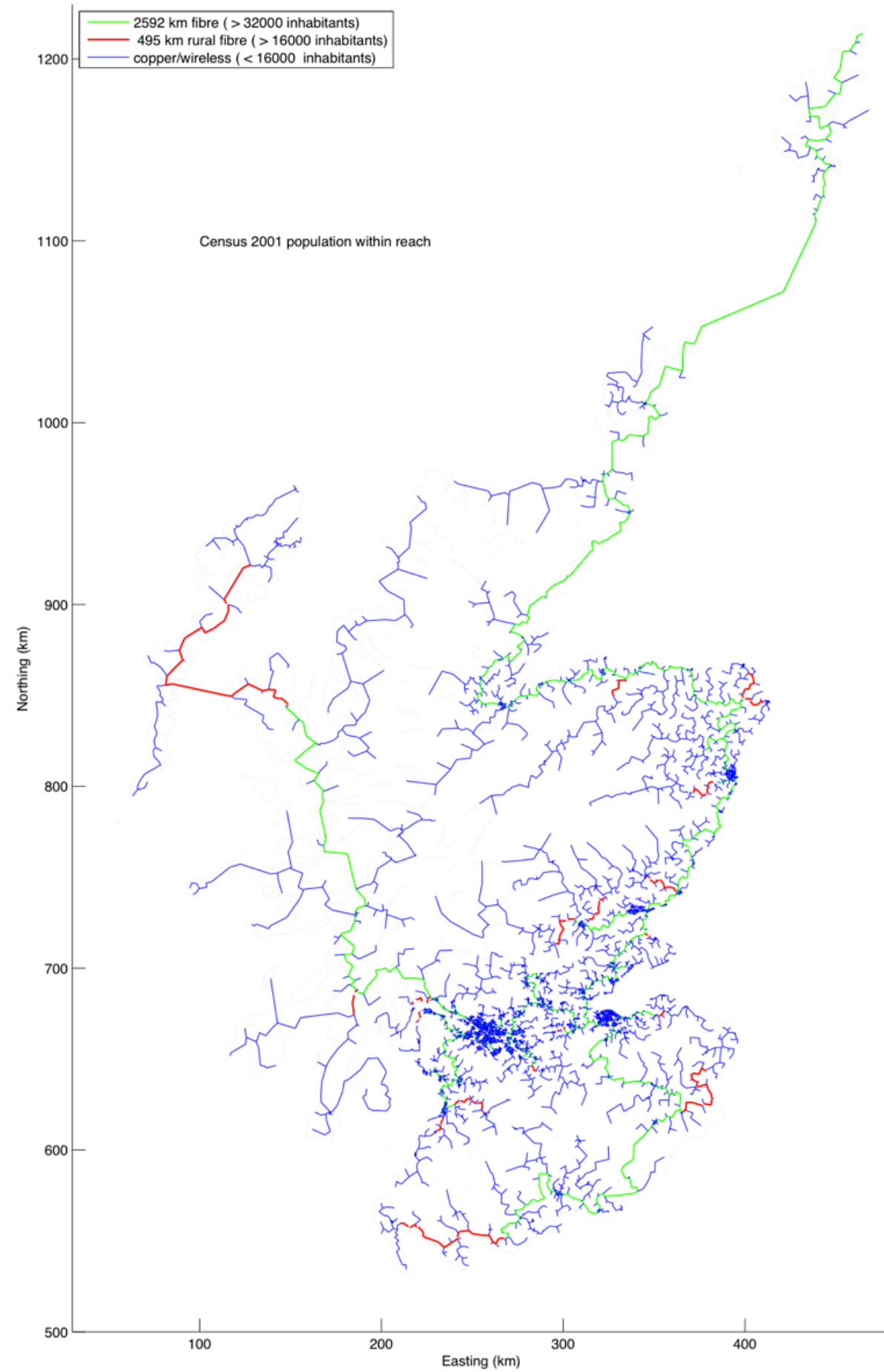
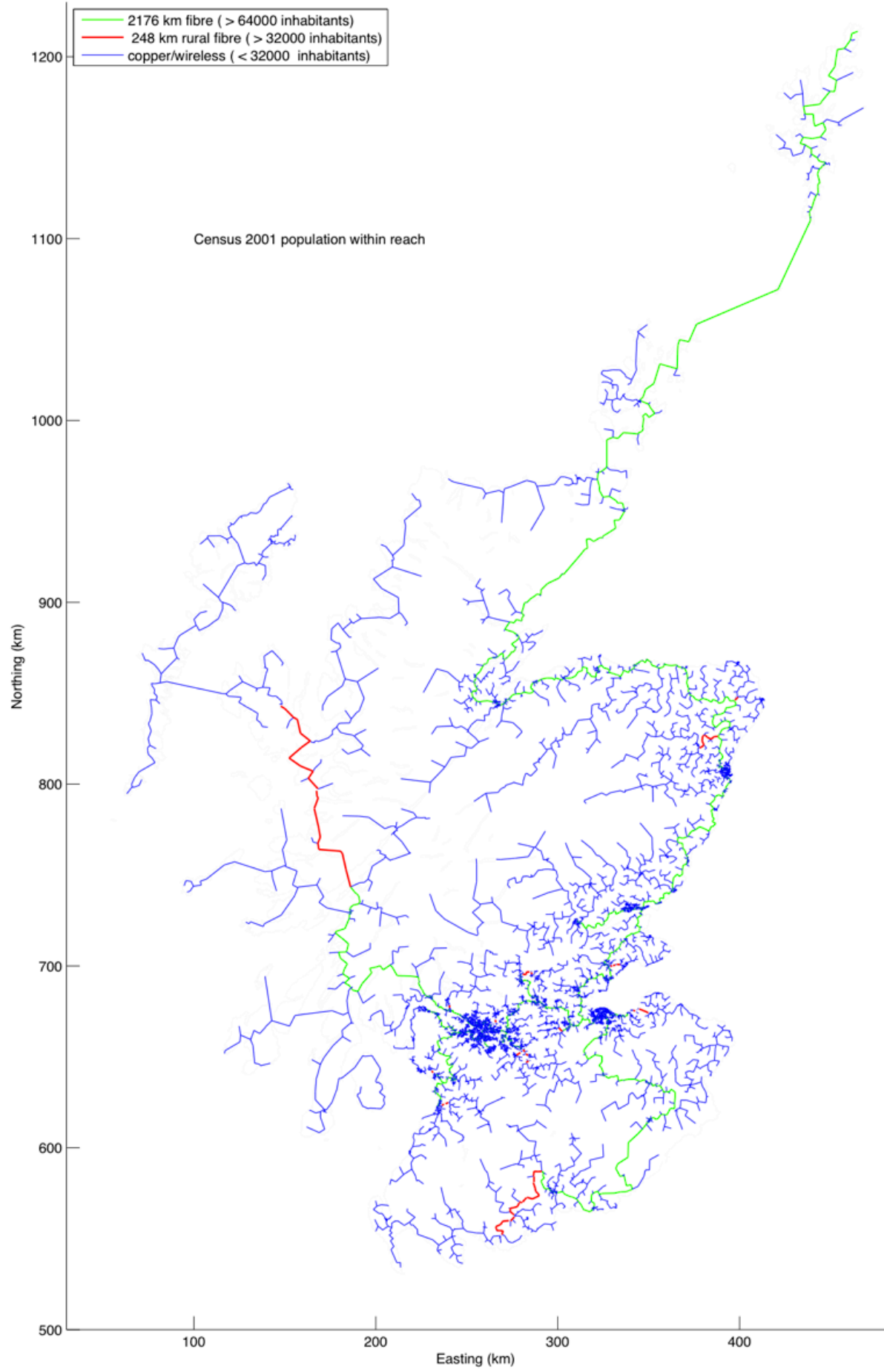
Census 2001
density $> 70/\text{km}^2$



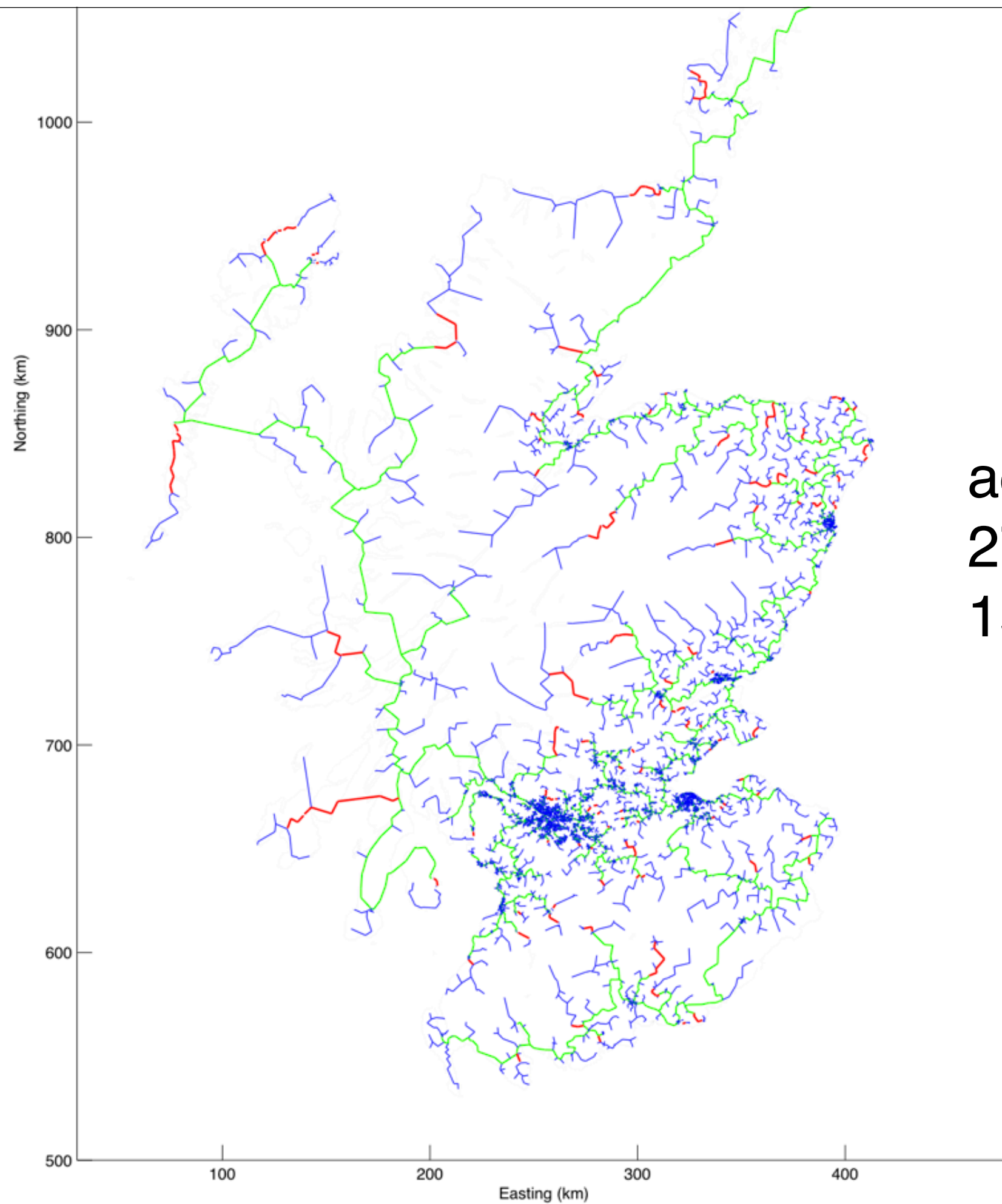
Skye	10,000
Orkney	20,000
Na h-Eileanan Siar	26,000
Shetland	22,000
Highland	208,000

wireless/copper
512 Mb/s backhaul @ 25:1
supports

speed	subscribers	population
128 Mb/s	100	200
16 Mb/s	800	2,000
2 Mb/s	6,400	16,000



		2010	2011	2012	2013	2014	2015
Mb/s		0.5	1	2	4	8	16
maximum fringe populations		64,000	32,000	16,000	8,000	4,000	2,000
km fibre added	rural	<i>status quo</i>	278	564	596	599	716
	urban		200	282	300	391	333
Fibre reaches		Glasgow, Edinburgh, Aberdeen, Dundee, Stirling, Inverness, Perth, Orkney, Shetland	Oban - Skye Dumfries - Kirkcudbright	Skye - Harris - Lewis Kirkcudbright - Stranraer Coldstream - Kelso Forfar, Creiff, Blairgowrie	Mull of Kintyre Pitlochry Grantown-on-Spey Fort William	Arran Ullapool Aviemore Mull	Islay Lochboisedale Killin Aberfeldy
FTTOA popⁿ		780,631	900,277	1,089,865	1,296,162	1,590,438	1,950,580
total fibre		2475	2953	3799	4695	5685	6734



added fibre:
2750 km rural
1500 km urban

Recommendations for Scotland

1 remove obstacles

- rates for masts and fiber
- charges for subsea cables
- spectrum for rural use

minimum	2010	2015	2020
Mb/s	2	16	128

2 enable competition and collaboration

- open infrastructure

3 stimulate development

- open public data
- open source procurement
- planning requirements

4 universal access and digital inclusion

- community access and training
- invest in core network

