

Unacceptable telecommunications masts (10) – directing 4G to where it is needed in the Highlands

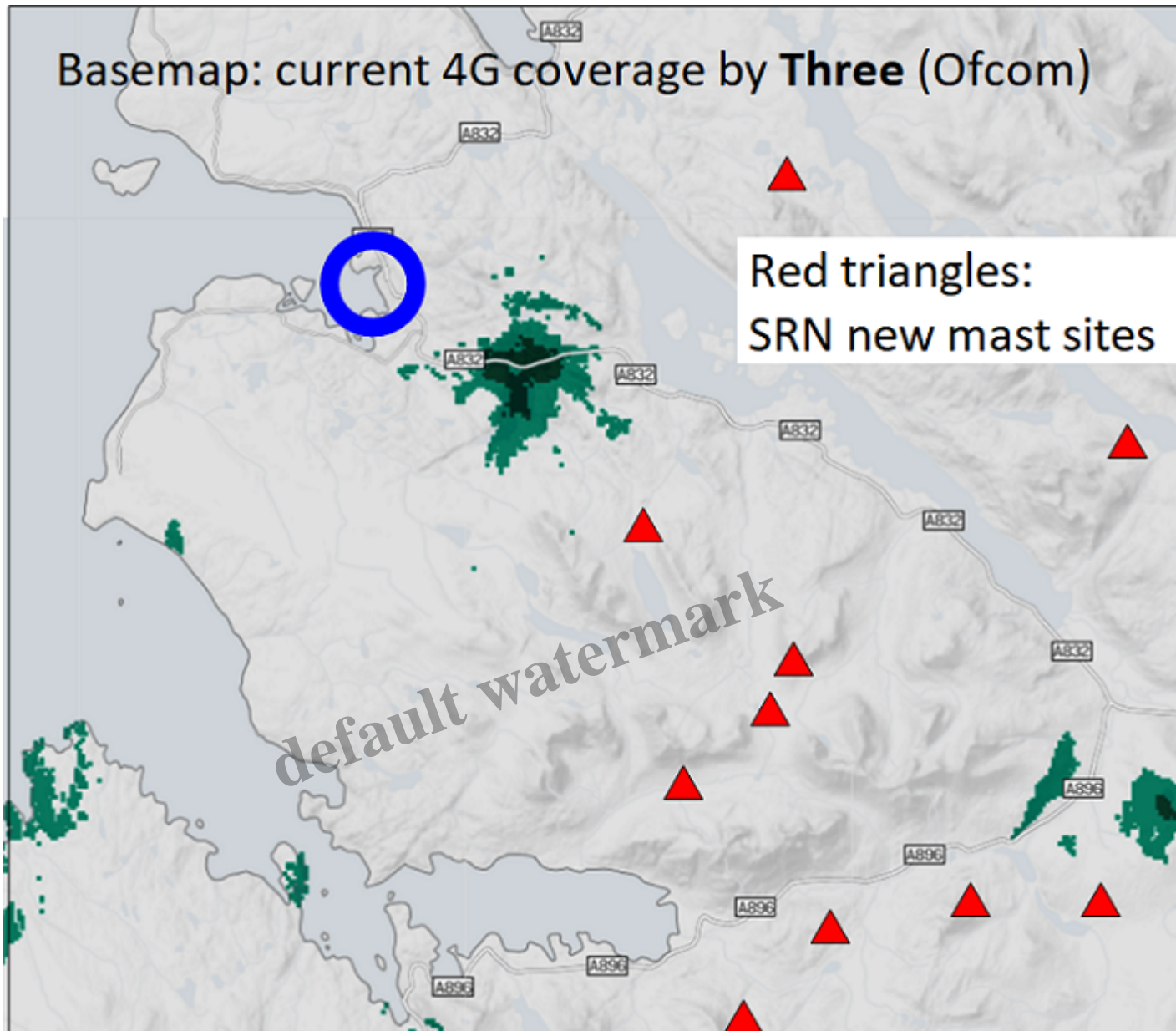
Description

[Ed's note. This post complements the points David made in the excellent article by Vicky Allan in the Sunday Herald at the weekend: "£1m per mast. So who will benefit from costly new Highland phone lines?" ([see here](#))].

The Shared Rural Network (SRN) was launched in 2020 to improve 4G mobile coverage in rural areas across the UK – particularly in Scotland. It was at first widely welcomed but it is now becoming clear that its bizarre, area-driven planning algorithm doesn't deliver in the Scottish Highlands. So much so that many Scottish stakeholders are now calling for a rethink before resources are wasted and wild land unnecessarily damaged.

To explain this, let us look at current 4G coverage in the Torridon/Gairloch areas by the network 'Three' :

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Gairloch = blue circle. Green and black areas coverage by Three. Loch Torridon is left of centre at bottom of map and Shieldaig is on the peninsular where the loch narrows.

'Three' are evidently struggling to deliver here and, like Vodaphone and O2, appear to be behind schedule. Frustrating for folk in Gairloch. Places like Gairloch, Torridon and Shieldaig are classified as 'PartialNotSpots' and here the SRN is NOT supported by public funds.

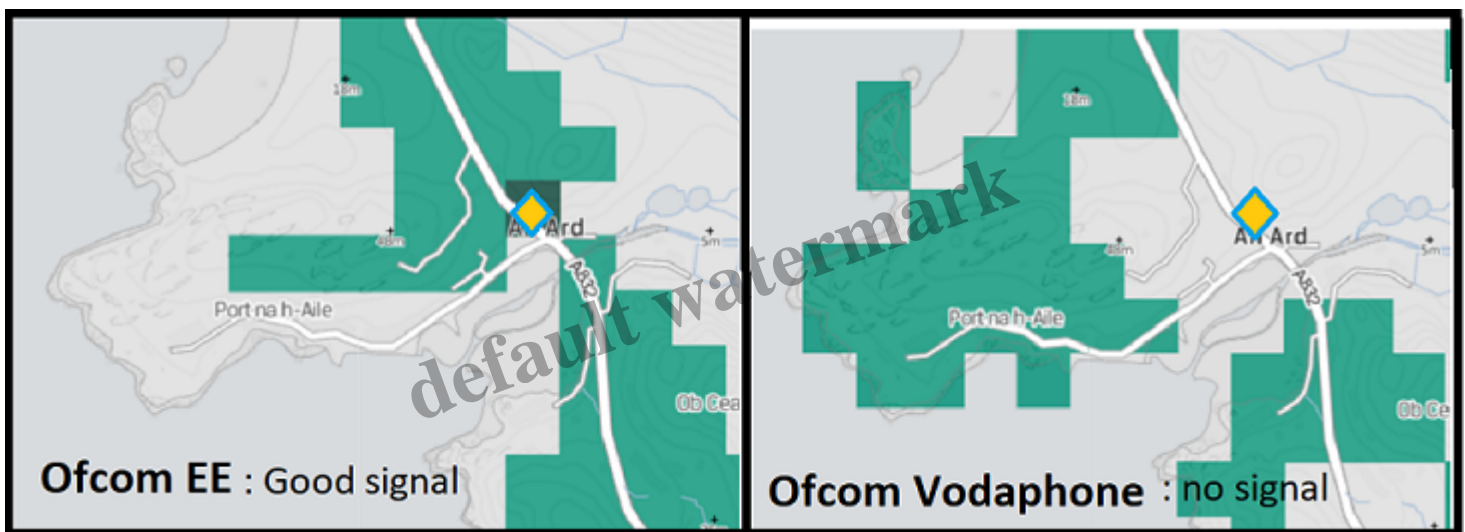
The £500M Government contribution to the SRN will provide many new masts in the (provisional) locations marked by the red triangles most of which are in uninhabited areas. These will not help Gairloch. Indeed they will help no-one because these areas are what NatureScot has designated Wild Land: where there are no buildings, roads, and virtually no people. Work on these masts will actually impede progress with the useful parts of SRN by consuming resources. Highland Council Planning have already had to process the first of 200 planning applications for masts, tracks and generators in these sensitive areas. The first application, in Torridon ([see here](#)), collected 100 objections and has

now been withdrawn ([see here](#)) for rework.

Why is it like this? Because SRN has chosen to eliminate as many TotalNotSpots as possible, measured *by the new land area they cover* with no regard for people, premises, or roads. So, like settlers, new masts are attracted to virgin territory. This approach may work in much of the UK, but it doesn't deliver in the Highlands – e.g. Gairloch. It seems obvious that SRN should first tackle PartialNotSpots like Gairloch, before seeking to tame the TotalNotSpot wilderness.

In the Highlands, the target for the industry-funded PartialNotSpot element of SRN is to increase the area covered **by all 4 networks** to 68%. SRN targets are set and verified using Ofcom predicted coverage maps.

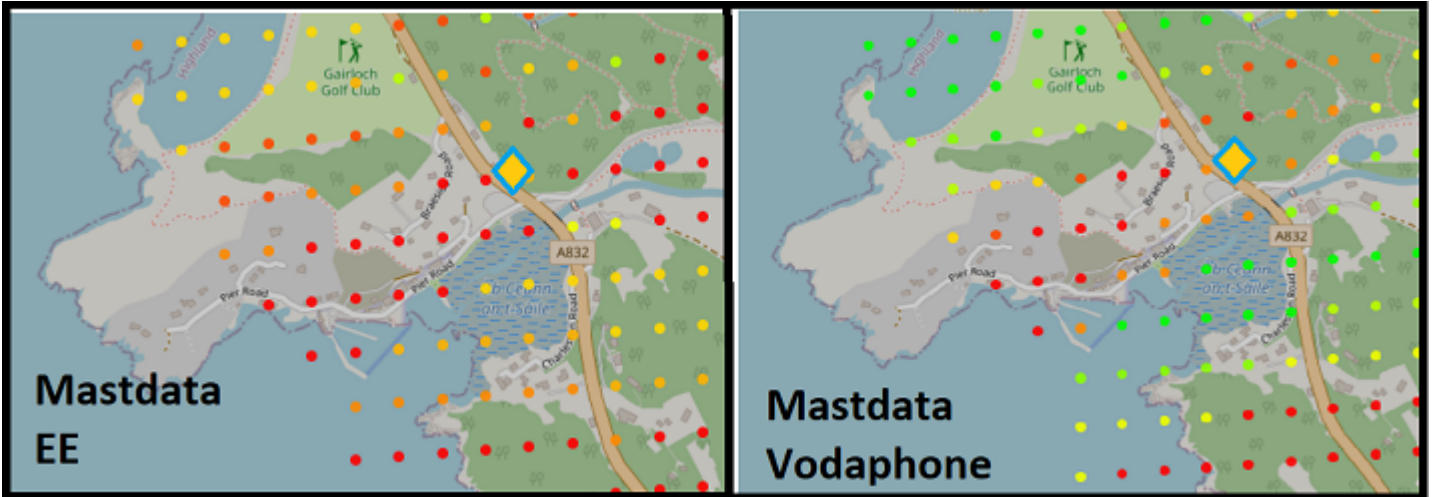
To see how this plays out in Gairloch, consider the Ofcom-predicted coverage for an imaginary plumber based at (for example) IV21 2BD / NG809792 ,the yellow diamond on the maps below:



An EE handset is the easy choice.....until she is called to a job round the corner at the harbour. So she invests in a second, Vodaphone, handset and leaves her apprentice at base with the EE phone.

Problem#1. Ofcom maps are predictions of coverage projected from the mast sites. The reality on the ground may be different. Mastdata coverage maps are created by recording signal strengths from users phones as they move about.

Mastdata suggests neither phone will work in either location!



[Red dots =poor, Green dots =Good

Problem#2. Even if the Ofcom maps are correct, our plumber can only speak to her apprentice if she is in a Vodaphone patch *at the same time* as her apprentice is in an EE patch!



Which phone where? People in places like Gairloch need to be able to phone a plumber.

Right to Roam

The first priority for rural users is a handset that works everywhere in their area. The SRN offering for our plumber is to add coverage from Three – but patchy coverage from four competing networks is NOT what Gairloch needs right now.

One obvious solution would be to enable handset roaming in rural Highlands areas so that phones would just connect to the nearest available mast. Network competition may be good in cities, but not here.

Another approach for the rural Highlands would be to concentrate available resources on providing one excellent network (a CalMac of the airwaves), with say 99% coverage of populated areas.

As landlines are phased out, the reliability of 4G is becoming more important, especially during storms and power cuts. A single network would be easier to support with local spares depots and local on-call engineers.

Wild Land

We should also reconsider what is best in the vast tracts of Wild Land. The first re-calibration is to recognise that empty Wild Land does not create a need for 4G coverage. Any new masts need to be justified by their utility. The value of this land lies not its potential for development but in its wildness. This is of course the opposite of the philosophy driving SRN.

This is not to say that coverage should be prohibited; we have a duty to provide life-saving emergency assistance. Much Wild Land can be covered from masts built outside these areas: more than 50% already has coverage. In wild terrain 100% coverage can never be achieved with masts, wherever we allow them to be built. Also bear in mind that an SRN mast will not necessarily be used by all four operators, so new SRN coverage will still depends on which network you are use. For reliable emergency cover, 4G phones also suffer from short battery life.

Better solutions which do not damage the wild land are available. Satellite phones are one possibility, but Personal Locator Beacons are the obvious choice ([see here](#)). They could (should) be mandatory for anyone working in remote areas like Wild Land. Government assistance could be provided to help local businesses to acquire them; and/or or local rental sites could be provided to service occasional users and visitors.

Postscript

[Ed]. 30 minutes after this post appeared a reader who had lived in Gairloch got in contact to say they were on vodafone, "4G is perfectly fine in Gairloch" and they had fibre to the home "so the last thing we need in the area are more telecoms masts!" As they commented the coverage maps being used to justify the SRN programme " are either well out-of-date, wildly inaccurate, or generated with a hidden agenda."

Category

1. Other parts Scotland

Tags

1. landscape
2. Local communities
3. masts
4. NatureScot
5. planning
6. wild land

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