

Unacceptable telecommunications masts (24) at Ryvoan and other Wilderness Masts may be obsolete before they are completed

Description

The Total Not Spot (TNS) element of the UK Government's £500M Shared Rural Network programme is building 260 new masts to provide 4G mobile coverage in remote and uninhabited parts of Scotland. Due to complete in 2027, one of its objectives is to replace the 999 coverage currently provided by 2G when this network is switched off in 2030 ([see here](#)).

However, advances in smartphone technology threaten to make these masts obsolete before they are even completed. All smartphones can receive GPS data *from* satellites, but next-generation handsets will be able to *send* text messages (and SOS calls) via satellite. 999 call coverage will then be 100% of the UK: much better than the 95% area target of SRN and the current 2G coverage of 96%.

High-end phones are leading the way, but others will surely follow as smartphone sales now depend on upgrades. Apple has already integrated satellite SOS messaging into its £600 iPhone 14, and Android models in the US have started with Google's Pixel 9 which retails at £800. Starlink are also in the game, but they will need to agree support from a UK mobile operator and Ofcom approval to use certain radio bands.

It's not easy and nothing is inside a smartphone but money talks, and the £400 billion smartphone market is 50 times the annual budget for NASA's next moonshot. Satellite communications requires a special antenna in the handset, along with dedicated electronics and software to configure bespoke message formats. Further, satellite ground handling equipment needs to identify where to send the received message. There are seven 999 call centres in the UK alone, so globally that's no small task, and one which needs constant updating and 24/7 availability.

In the near future, smartphone access to satellites will only be for low data-rate text messages. Ideal for a standardised SOS message which identifies you, the type of emergency, your position, and perhaps a pre-registered emergency contact without draining your battery. Explorers wild camping in remote Scottish glens or staying at bothies like Ryvoan will not be able to stream live football, or manipulate online spreadsheets. Perhaps that's a good thing, to help them experience a Wild Landscape unsullied by civilisation.

Even better, the £500M SRN budget could be repurposed to improve mainstream connectivity to where it is needed: remote Scottish communities, rather than dissipating it on the white elephant which is the TNS scheme.

The planning application for the telecommunications mast at Ryvoan ([see here](#) and [here](#)) is due to be considered by the Cairngorms National Park Authority Planning Committee on 13th December. It could provide a test case for the need for these masts. Planning officers should be highlighting that the proposed mast could be redundant within four years and recommend that board members take that into account and decide whether the proposed mast, are all the others in the planning pipeline, are sustainable or represent wise use of resources.

References

iPhone 14 costs Â£600 apple.com/uk/shop

How satellite connection works on iPhone <https://support.apple.com/en-gb/105097>

Google Pixel 9 costs Â£800 store.google.com/gb/

How satellite connection works on Google Pixel 9 pixelphone/answer/15254448

Google uses satellite service provider Skylo skylo.pressrelease and Garmin's emergency response centre garmin.press-release

Iridium GO 9560 Satellite Terminal Â£1178 satphone.co.uk/iridium-go-9560-satellite-wifi-hotspot

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Author

david-craig

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