

Reference: 01549660

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Freedom of Information: Right to know request

Thank you for your request for information in relation to 5G transmitters and receivers in Stockport. We received this request on 28 December 2022. We have considered it under the Freedom of Information Act 2000 (the "FOI Act") and the Environmental Information Regulations 2004 (the "EIR").

Your request and our response

With regards to the above FOI about [locations of 5G mast installations in Stockport and insurance held by mobile network operators](#).

I would like to rephrase the information requests in such a manner so as not to ask for specific locations of 5g masts, so that there would be no excuse of "national security" for fear of them being the target of any sabotage.

So my URGENT questions would be:

1. How many 5g transmitter/receivers (regardless of size) are installed in public places throughout Stockport, UK?

Based on data provided to us earlier in 2022, we believe that there were 38 5G enabled site locations in Stockport at that time - some of which may be shared between mobile network operators ("MNOs") (i.e. have multiple MNOs with transmitters on these sites). There may have been further sites installed since that data was provided.

We note that (i) many transmitters will be installed on private property (e.g. on rooftops) rather than areas that are accessible to the public; and (ii) regardless of where a transmitter is installed, MNOs are required to ensure their transmitters do not expose the general public to EMF in breach of the ICNIRP Guidelines in any area in which the general public may be present (as explained in our [Guidance on EMF Compliance and Enforcement](#)).

2. If known, please give the minimum and maximum output powers of the transmitters?

Copies of licences are published on Ofcom's website in the pages linked from [Mobile and wireless broadband](#) and these set out the maximum permitted transmitter power levels. Please note that in order to optimise network planning, actual transmission powers are often significantly lower than the permitted maximum. Technical reference material such as relevant UK Interface Requirements is also published in this area. We do not hold information on minimum output powers of the transmitters.

3. If it is known by your organisation can you confirm if 5g transmitters are, or plan to be, installed within public street lighting?

We do not hold information on commercial small cell deployment plans (i.e. smaller transmitters covering a smaller area).

However, we note there are reports of the increasing use of small cell technology in 4G and 5G network deployments, which may include deployments on streetlights/lamps.

Small cells (including any installed on streetlights/lamps) could be useful to provide capacity in specific locations with concentrated high demand for wireless broadband. While more 'small cells' may be needed, they will operate at lower power than existing 'macro sites' (i.e. existing mobile masts). In addition, MNOs will still be required to ensure that these sites, both individually and in aggregate, do not exceed the limits set out in the ICNIRP Guidelines. We are not aware of any evidence to suggest that the aggregate exposure from multiple small cells will be significantly different to that from macro sites.

We would also note that some lampposts and other street furniture, buildings, structures etc have been used to mount radio antennas for many decades, delivering a range of services (such as public WiFi and the control/monitoring of CCTV) using various technologies. Whilst some lampposts may today, and in the future, carry 5G, this is not a new concept.

4. How many 5g transmitters are installed with school or college grounds?

We do not hold this information.

5. How many 5g transmitters are installed directly outside schools or colleges?

We do not hold this information.

6. How many 5g transmitters are installed within 400m of schools or colleges?

We do not hold this information.

7. Do you as a publicly funded organisation require the mobile operators to produce proof that the 5g systems are none harmful to their local environment for all and all life forms (human, animals, insects, plants)? And if so can you please provide copies of any documentation provided to your organisation for the transmitters either installed or proposed.

We are not a public health body and do not have environmental expertise. [The UK Health Security Agency](#) (UKHSA) is responsible for public health matters associated with radiofrequency electromagnetic fields (EMF), or radio waves. UKHSA's main advice is that EMF levels should comply

with the internationally agreed levels in the ICNIRP Guidelines. On its website, UKHSA notes that “*expert groups have examined the accumulated body of research evidence at national and international levels. Their conclusions support the view that health effects are unlikely to occur if exposures are below ICNIRP’s internationally agreed guideline levels.*”

Consistent with this, [spectrum licences](#) issued by Ofcom require licensees (including MNOs) to ensure that their use of equipment (operating above a certain power) complies with the internationally agreed EMF levels in the ICNIRP Guidelines for the protection of the general public, and keep records to demonstrate how they have done this.

Ofcom carries out unannounced tests of EMF levels around radio transmitters, including mobile phone masts, and can take [enforcement action](#) against spectrum licensees if they produce EMF at levels above those set out in the ICNIRP Guidelines. All [measurements](#) to date over many years have shown that EMF levels are well within the internationally agreed levels in the ICNIRP Guidelines. We recognise that there is a lot of public interest in this issue, and we will continue to carry out EMF measurements as 5G rollout continues, and publish these on our website.

There are also [codes of practice in England and Wales](#) which explain that MNOs are committed to compliance with internationally agreed levels of exposure to electromagnetic fields. These codes also require MNOs to self-certify that installations comply with the public exposure levels in the ICNIRP Guidelines. Further information on [masts and planning](#) is available on our website.

To clarify a point of fact, Ofcom is not publicly funded. We are independent, and funded by fees paid to us by the companies we regulate. Further information is available from the [about Ofcom](#) section of our website, including in our annual reports.

8. Having checked the data on the site referenced in the above FOI ([Connected Nations and infrastructure reports - Ofcom](#)) I could not find data that specifically indicated numbers relating to 5G transmitters (which are the problem), merely by GIGABIT availability. We are not concerned about fiberoptic installations. So could you therefore (without the need to disclose precise locations) inform us of how many 5G wireless transmitters are installed and planned to be installed in the coming couple of years.

With regard to existing, installed masts, please see response to question 1 above.

With regard to planned deployments for mobile networks including the use of 5G technology, we do not hold this information. In 2022, as a supplement to our Connected Nations report, we published a [report about planned network deployments](#) for Very High Capacity Networks (VHCN) and the plans of operators to extend or upgrade Fixed Wireless Access (FWA) networks. Whilst some of the FWA deployments supplied to us may have included the use of 5G technology, we did not gather enough information to identify the figure you have requested.

We would also note that MNOs have licences issued by Ofcom which authorise the use of blocks of spectrum on a national basis, for which they self-plan their assignments and rollout. Licences have been issued on the basis of technology and service neutrality, which means that the user can decide what technology to use or service to provide in a particular frequency band as long as it complies with the technical conditions we have set.

MNOs' websites may contain information relating to their future plans for 5G deployment and all four mobile network operators ([Vodafone](#), [O2](#), [EE](#) and [Three](#)) have coverage prediction maps on their websites, available to the public, which can be searched to see whether an area has 5G coverage. Information we may collect periodically, (such as for the Connected Nations and Infrastructure Reports mentioned in our previous response), is only a snapshot and will not track the progress of deployments through the year.

9. Who is/are your point of contact for 5g installations in Stockport Council?

We do not have specific contact points within local councils, such as Stockport.

10. If you are not able to provide the information requested, please provide, if known, to which department or public servant authority should we be directing our questions (for each of the questions above).

Further information is available on our [website](#), including in our [General EMF Queries](#), [Our rules on EMF exposure](#) and [Guide on 5G Technology](#). You may also find helpful information on [the UK Health Security Agency](#) (UKHSA)'s website and we note that Stockport Council publishes various information on its [planning processes](#).

I hope this information is helpful. If you have any queries, then please contact information.requests@ofcom.org.uk. Please remember to quote the reference number above in any future communications.

Yours sincerely,

Temiloluwa Dawodu

If you are unhappy with the response you have received in relation to your request for information and/or consider that your request was refused without a reason valid under the law, you may ask for an internal review. If you ask us for an internal review of our decision, it will be subject to an independent review within Ofcom.

The following outcomes are possible:

- the original decision is upheld; or
- the original decision is reversed or modified.

Timing

If you wish to exercise your right to an internal review, **you should contact us within two months of the date of this letter**. There is no statutory deadline for responding to internal reviews and it will depend upon the complexity of the case. However, we aim to conclude all such reviews within 20 working days, and up to 40 working days in exceptional cases. We will keep you informed of the progress of any such review. If you wish to request an internal review, you should contact information.requests@ofcom.org.uk.

If you are not content with the outcome of the internal review, you have the right to apply directly to the Information Commissioner for a decision. The Information Commissioner can be contacted at:

Information Commissioner's Office
Wycliffe House
Water Lane
Wilmslow
Cheshire
SK9 5AF