

Reference: 01892554

Information Requests  
[information.requests@ofcom.org.uk](mailto:information.requests@ofcom.org.uk)

3 October 2024

## Freedom of Information request: Right to know request

Thank you for your request for information for the licences for 5G towers across the UK. We received this request on 5 September 2024 and we have considered your request under the Freedom of Information Act 2000 (“the FOI Act”) and the Environmental Information Regulations 2004 (the “EIR”).

### Your request

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*“I am writing to formally request information regarding the licenses issued for 5G towers across the UK. Specifically, I would like to obtain details of the 5G licenses for each and every 5G tower currently in operation. This includes, but is not limited to, the location of each tower, the license holder, and any technical specifications related to the operation of the 5G infrastructure.”*

### Our response

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We do not issue “5G” licences. Mobile Operator licences (published on our website at [Mobile and wireless broadband below 5 GHz](#)) are authorisations for the use of spectrum, for which a range of technologies including 2G – 5G may be employed as required by a licensee. The licences authorise the use of blocks of spectrum nationally (“block-assigned”) so, for licensing purposes, we do not hold information about the locations of deployments or which technologies are in use, as these are self-managed by each operator. The licences available through the above link do however identify the licence holder and the technical parameters that are authorised under the licence.

We presume your reference to “towers” is a reference to physical telecommunication or mobile sites with transmitters of mobile phone signals. As with licences, there are no “5G” towers. Towers are metal structures which have no specific technology attributed to them and we do not license the towers, only spectrum. Spectrum is transmitted via antennas and antennas may be hosted not only on towers and masts but also, inter alia, tower blocks, rooftops, poles, lampposts, street furniture or billboards/signs.

Ofcom may, from time to time, request deployment information for certain purposes such as measuring compliance with coverage obligations or for market research/connected nations studies. However, Government has advised that the disclosure of the location of mobile sites is a threat to national security.

We consider that this request falls under an exemption in the EIR and we have therefore decided not to disclose it.

The EIR provides that a public authority may refuse to disclose environmental information requested to the extent, amongst other things, that its disclosure would adversely affect international relations, defence, national security or public safety (regulation 12(5)(a) of the EIR), and in all the circumstances of the case, the public interest in maintaining the exception outweighs the public interest in disclosing the information.

Ofcom has considered your request in light of the relevant statutory scheme. We have also considered advice from HM Government on the potential implications of disclosure of information relating to the location of mobile sites (and other information relating to mobile sites) in the context of national security. HM Government has raised significant concerns with Ofcom about the release of this type of information on national security grounds and has advised that disclosure of this type of information would adversely affect national security.

Taking this into account, Ofcom considers that regulation 12(5)(a) of the EIR is engaged; specifically, that disclosure of the information would adversely affect national security.

In applying this exception, Ofcom has balanced the public interest in withholding the information against the public interest in disclosing it and decided that in all the circumstances of the case the public interest in maintaining the exception outweighs the public interest in disclosure. In assessing this, under regulation 12(2), we have also applied a presumption in favour of disclosure. Annex A sets out the exception in full, as well as the factors we considered when deciding where the public interest lay.

Further information on 5G is available in our [Guide on 5G Technology](#) and on our [website](#).

If you have any further queries, then please send them to [information.requests@ofcom.org.uk](mailto:information.requests@ofcom.org.uk) – quoting the reference number above in any future communications.

Yours sincerely,

## Information Requests

### Request an internal review

If you are unhappy with the response you have received to your request for information, or think that your request was refused without a reason valid under the law, you may ask for an internal review. If you do, it will be subject to an independent review within Ofcom. We will either uphold the original decision, or reverse or modify it.

If you would like to ask us to carry out an internal review, you should get in touch within two months of the date of this letter. There is no statutory deadline for us to complete our internal review, and the time it takes will depend on the complexity of the request. But we will try to complete the review within 20 working days (or no more than 40 working days in exceptional cases) and keep you informed of our progress. Please email the Information Requests team ([information.requests@ofcom.org.uk](mailto:information.requests@ofcom.org.uk)) to request an internal review.

### Taking it further

If you are unhappy with the outcome of our internal review, then you have the right to [complain to the Information Commissioner's Office](#).

**Annex A**

**Regulation 12(5)(a) of the Environmental Information Regulations 2004**

**The exception**

*Regulation 12(5)(a) of the Environmental Information Regulations 2004 – a public authority may refuse to disclose information to the extent that its disclosure would adversely affect international relations, defence, national security or public safety.*

The regulation is engaged because disclosure of this information would adversely affect national security.

**The public interest test**

Regulation 12(5)(a) is subject to the public interest test.

Key points:

Ofcom can refuse to disclose information under this exception only if in all the circumstances of the case the public interest in maintaining the exception outweighs the public interest in disclosing the information. In assessing this, under regulation 12(2), Ofcom must also apply a presumption in favour of disclosure.

In carrying out the public interest test, Ofcom should consider the arguments in favour of disclosing the information and those in favour of maintaining the exception, attaching the relative weight to each argument (for and against disclosure) to decide where the balance of public interest lies.

We have set out the matters Ofcom have considered in reaching its decision with respect to the public interest below.

Factors for disclosure	Factors for withholding
<ul style="list-style-type: none"> <li> <b>Transparency:</b> There is always a general public interest in transparency. The EIR implements EU Directive 2003/4/EC on public access to environmental information. Recital 1 of the preamble to the Directive states this public interest:                        <i>“Increased public access to environmental information and the dissemination of such information contribute to a greater awareness of environmental matters, a free exchange of views, more effective participation by the public in environmental decision-making and, eventually, to a better environment.”</i> </li> </ul>	<p>HM Government has advised Ofcom that:</p> <ul style="list-style-type: none"> <li>Disclosure of this type of information raises significant concerns on national security grounds and would adversely affect national security.</li> <li>Specifically, disclosure of this type of information would create an increased threat to the UK’s Critical National Infrastructure (CNI). CNI is those critical elements of infrastructure (including assets, facilities, systems, networks or processes), the loss or compromise of which could result in major detrimental impact on the confidentiality, integrity, and availability of networks, or delivery of essential services (including those of the emergency services).</li> </ul>

<ul style="list-style-type: none"> <li>• <b>Accountability:</b> Mobile sites produce electromagnetic fields (EMF) or radio waves. At high enough levels, EMF can impact public health. As a result, the UK Health Security Agency (previously known as Public Health England (PHE)), an expert health body, <a href="#">advises</a> that spectrum users should ensure that EMF levels comply with the internationally agreed levels in the <a href="#">ICNIRP Guidelines</a>. Some individuals may have concerns about the potential health effects of EMF and want to know the location of any mobile site in their local area and whether the EMF levels from such mobile sites comply with the levels in the ICNIRP Guidelines.</li> <li>• <b>Information already in the public domain:</b> Some local planning authorities have published information on the location of mobile sites (including on proposed sites). Information on mobile site locations is also available on some open-source websites and mobile network operators' (MNOs) websites may indicate the general location of some masts (as well as future roll-out plans).</li> <li>• The location of mobile sites and other technical data is published in some other countries including in Ireland, France and Australia.<sup>1</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Government has strong concerns about publishing this type of information and has advised that publishing information on mobile sites constitutes a security risk (in particular, publishing aggregated information in a single dataset).</li> <li>• Government's concerns centre on four areas: <ol style="list-style-type: none"> <li>1. <b>Espionage/sabotage:</b> Publishing this type of information could enable an attacker to remotely survey which mobile sites would be of interest from an espionage, sabotage or disruption perspective (in particular if we were to publish information relating to a large number of mobile sites in the UK).</li> <li>2. <b>Jamming:</b> Publishing this type of information could enable the jamming of radio signals.</li> <li>3. <b>Physical security:</b> Information relating to hub sites (mobile sites that act as their own radio coverage site and also serve to 'daisy chain' other sites), switch sites, and data centres would be of particular concern from a national security perspective. The physical security of hub sites will become even more important as features such as Mobile Edge Computing become widely available.</li> <li>4. <b>Developments in emergency services communications:</b> In the future, knowledge of commercial networks could help enable an attacker to target the UK's emergency service communications network to a degree that knowledge would not have enabled in the past. This is due to the Emergency Services Network programme switching emergency service communication from the private Airwave network to a commercial network.</li> </ol> </li> <li>• Government has acknowledged that where detailed technical information is not requested, an attack is more difficult. However, site location provides the starting point for an attack to gain and build additional and more detailed information that may then make any subsequent attack more likely to succeed.</li> </ul>
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<sup>1</sup> <http://siteviewer.comreg.ie/#explore> (Ireland); <https://www.cartoradio.fr/index.html#/cartographie/stations> (France); [https://web.acma.gov.au/pls/radcom/site\\_proximity.main\\_page/](https://web.acma.gov.au/pls/radcom/site_proximity.main_page/) (Australia).

	<p>Taking into account the factors in favour of disclosure, and Government's advice, we have also taken into account the following:</p> <ul style="list-style-type: none"><li>• We consider the national security risks associated with disclosing the location of mobile sites in a single, aggregated and user-friendly data set to raise a different and higher national security risk than the ad hoc disclosure of some mobile site locations as part of a planning process. We also consider that relying on information published by planning authorities is, for example, likely to make it much harder for a bad actor to coordinate an attack. This is because there may be incomplete information held by planning authorities, information may be difficult to obtain from the planning authorities and it is likely to take a significant amount of time to build up any meaningful dataset. For example, some local planning data has not been updated for several years. Further, MNOs' websites only provide general location information and do not disclose specific site locations.</li><li>• Current open-source options are of much more limited use to a potential attacker than the data being requested - the data set being requested has the potential to be more damaging due to both its granularity and authoritative status.</li><li>• On accountability, we do not set EMF safety levels, but we do carry out proactive testing of EMF levels near to mobile sites to check they comply with the internationally agreed levels in the ICNIRP Guidelines. Our <a href="#">website</a> provides information on recent testing and measurements of EMF levels that we have taken near mobile sites. Our <a href="#">published measurements</a> have consistently shown that EMF levels are well within the internationally agreed levels in the ICNIRP Guidelines. We also provide a <a href="#">service</a> where individuals can request Ofcom to carry out EMF measurements near mobile sites.</li></ul>
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	<ul style="list-style-type: none"> <li>• There have been a significant number of attacks on mobile sites in recent years and publishing information on the location of sites risks further sites being attacked. Such attacks always have an adverse impact such as customers losing mobile signal and mobile operators incurring additional costs but they can have severe consequences, for example, where a mobile site that supports critical communications for the emergency services is attacked; the impact can be particularly serious in the current climate if there is disruption to a hospital's communications systems. Such attacks can also cause physical harm to employees of mobile operators, emergency services personnel and the general public.</li> </ul>
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**Reasons why public interest favours withholding information:**

- The greater likelihood of the adverse effect, the greater the public interest in maintaining the exception. This is affected by how extensive the adverse effect is – in this case the adverse effect on national security has the potential to affect the security of the United Kingdom and its people, and the opportunity for the adverse effect to arise is ongoing.
- The impact of the adverse effect on national security also has the potential to harm the United Kingdom and its people and is therefore severe.
- The open-source information that provides similar data may present inaccurate, partial or out-of-date data, which makes them of much more limited use to a potential attacker. Using these open-source information websites would not yield the same level of accuracy as would be contained in the information requested.
- Much of the other publicly available data does not disclose specific site locations or has not been updated for several years and is similarly likely to be inaccurate and incomplete.
- The security risk is also materially higher when all of the requested information is aggregated into a single user-friendly dataset, and published.
- We have carefully considered whether the arguments around transparency and accountability may outweigh the arguments in favour of withholding the information. In doing so, we have taken into account the national security risks identified above as well as (i) the fact all of our EMF measurements to date have shown that EMF levels are well within the internationally agreed levels in the ICNIRP Guidelines; and (ii) the high risk of attacks on mobile sites which can have significant adverse consequences.
- On balance, the arguments against disclosure – including the likelihood and severity of the adverse effect on national security, and the increased threat to national security in respect of the requested information when compared to the information already in the public domain - carry greater weight than the arguments in favour of disclosure. Therefore, the public interest in maintaining the exception outweighs the public interest in disclosure.
- We also note that on 24 September 2024 the Information Commissioner's Office [upheld](#) Ofcom's decision to withhold the disclosure of mast locations on the grounds of national security in the context of an appeal of Ofcom's application of the national security exception.

### **Regulation 12(5)(a) exception**

I have delegated authority from the Ofcom Board to make decisions in relation to Ofcom's obligations under the Environmental Information Regulations 2004 (EIR).

Taking into account the advice from Government on the potential implications of disclosure, in my reasonable opinion, disclosure of the information requested would adversely affect national security. Regulation 12(5)(a) of the EIR therefore applies.

In applying this exception, I have balanced the public interest in withholding the information against the public interest in disclosing the information. I have set out above the factors I considered when deciding where the public interest lies.

I have decided that in all the circumstances of the case, the public interest in maintaining the exception outweighs the public interest in disclosing the information. In assessing this, I have applied a presumption in favour of disclosure.

Disclosure of the information requested is therefore refused under regulation 12(5)(a) of the EIR.

If you have any queries about this letter, please contact [information.requests@ofcom.org.uk](mailto:information.requests@ofcom.org.uk).

Signed:

David Willis

Group Director, Spectrum

Date: 3 October 2024