

Right to know request

Thank you for your request for information about repeaters.

We received this request on 11 November 2024 and we have considered your request under the Freedom of Information Act 2000 (“the FOI Act”) and the Environmental Information Regulations 2004 (EIR).

Your request and our response

I would like to request information about the process Ofcom uses to track and request repeaters to be turned off where a mobile network operator detects interference. Specifically...

- (i) Please confirm how many interference complaints Ofcom received from mobile network operators in the last 3 years;
 - 1. 2022 – 176
 - 2. 2023 – 116
 - 3. 2024 YTD – 132
- (ii) In each year, how many times was the interference source relating to the complaint successfully identified?
 - 1. 2022 – 95
 - 2. 2023 – 75
 - 3. 2024 YTD – 65
- (iii) In each year, how many of these were attributed to illegal repeaters and how many to legal

By way of background, the mobile repeater licence exemption was reviewed and updated in 2022 to include multi operator repeaters. In conjunction with this work Ofcom designed a voluntary testing standard (VTS) to enable those manufacturers who wished to, to have their repeaters independently tested. This in turn would allow those manufacturers products to be included on a list on the Ofcom website to signpost consumers to products that they could purchase with confidence. To be licence-exempt in the UK, a mobile repeater needs to satisfy the terms, provisions and limitations in the Wireless Telegraphy (Mobile Repeater) (Exemption) Regulations 2022 (S.I. 2022/595, as amended in 2024 by S.I. 2024/136) (the “2022 Regulations”). The legislation as amended in 2024 can be found at <https://www.legislation.gov.uk/>.

If a mobile repeater meets the detailed technical requirements about radio frequency propagation set out in the 2022 Regulations, they then can be used without the user needing to hold a wireless telegraphy licence (under the Wireless Telegraphy Act 2006). However, this exemption, like many other exemptions set out in legislation, has an additional requirement set out in the legislation. The 2022 Regulations make clear in regulation 6 that irrespective of technical abilities of the mobile repeater “the establishment, installation and use of the mobile repeater must not cause or

contribute to undue [i.e. harmful radio] interference to other users of the electromagnetic spectrum”.

A mobile repeater causing harmful interference is operating illegally. The data we hold of proven interference cases from mobile repeaters is:

2022 – (55) The Ofcom VTS was introduced at the end of May 2022 - the cases up until June 2022 are 40 and 15 for the rest of 2022, a total of 55 for 2022.

2023 – 30

2024 YTD – 35

Further information about the VTS is available here: <https://www.ofcom.org.uk/phones-and-broadband/coverage-and-speeds/using-a-repeater-to-improve-indoor-mobile-phone-signal/>

An outline of the decision to make VTS mobile repeaters available:
<https://www.ofcom.org.uk/spectrum/radio-equipment/wireless-telegraphy-mobile-repeater-exemption-regulations-2022/>

Please note that between 2022 and 2024, only one mobile repeater under the VTS was identified as the source of interference. Following investigation this device rectified itself.

(iv) which repeater vendors/suppliers repeaters caused the interference?

We are unable to provide supplier/vendor details for the reasons explained further below, however we have been able to identify the following products that would not have met the requirements of the licence exemption to be on the Ofcom VTS.

- Phonetone
- Lintratek x 2
- Nikrans x 3
- Racom
- Talent

However please note that the majority of mobile repeaters not meeting the relevant requirements that we traced interference to, carried no manufacturer details.

Generally, suppliers are based overseas and are selling mobile repeaters into the UK that do not meet the necessary technical standards. There is little enforcement action we can take in these cases due to the inability of our enforcement powers to reach outside of the UK. Additionally, please note that in some investigations, the information suppliers/vendors may be lacking for various reasons, including individuals not having previous receipts to show supplier details. We would need to look through each of the cases mentioned above, and read through documents, to ascertain if we hold the information on suppliers.

It would take us a substantial amount of time to do this, approximately 30 hours, and consider that we can refuse this request on the basis that the request for information is manifestly unreasonable pursuant to regulation 12(4)(b) of the EIR. In particular, we consider that it is likely to cause a

disproportionate burden to search for the supplier details especially in light of the fact that we have been able to provide the details of the manufacturers we hold.

In applying the exception set out in regulation 12(4)(b) of the EIR, 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.

(v) details of the process Ofcom followed to remove the interference and how quickly the issue was resolved.

Engineers trace interference in the radio spectrum using several methods. They employ spectrum analysers to detect and measure unauthorised signals, helping to identify interference sources. Direction-finding equipment is used to locate the physical source by triangulating signal strength and direction. Field strength measurements across different locations assess the impact of interference. Additionally, reports from network operators and users experiencing degraded service provide impact evidence to help source interference such as illegal/unlicensed enhancers.

Cases relating to interference to Mobile Network Operator by repeaters took 62.2 days to resolve on average broken down as follows:

2022 – 86.0

2023 – 42.3

2024 YTD – 48.6

We hope this information is helpful. If you have any further queries, then please send them to information.requests@ofcom.org.uk – quoting the reference number above in any future communications.

Yours sincerely,

Information Requests

Annex A

Regulation 12(4)(b) of the Environmental Information Regulations 2004

The exception

Regulation 12(4)(b) of the Environmental Information Regulations 2004 – a public authority may refuse to disclose information to the extent that– (b) the request for information is manifestly unreasonable.

The regulation is engaged because disclosure of this information is likely to cause a disproportionate cost or burden.

The public interest test

Regulation 12(4)(b) 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"> • Transparency: 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> • Accountability: As part of the investigation of illegal interference some individuals may want to know what repeater vendors or suppliers are illegal. 	<ul style="list-style-type: none"> • Ofcom does not hold the requested data as an existing file, and would need to undertake significant manual investigation and processing to produce the requested information. This work would need to be undertaken by employees who are otherwise tasked with Ofcom’s investigative work and diverting resources to other tasks for a significant number of hours would negatively impact Ofcom’s process and compliance. • Given we have provided the details we hold on the manufacturers, we consider that this information will be useful to requestor.

<p>Reasons why public interest favours withholding some of the requested information</p> <p>Taking into account that we have disclosed information we hold on the manufacturers, and, as this information is not readily available, the time it would take to look through all files relating to each case to determine what, if any, information we hold on suppliers/vendors, we consider the burden of complying with this request would be disproportionate.</p> <p>Considering all the circumstances of the case, the public interest in maintaining the exception outweighs the public interest in disclosure.</p>	

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) 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](#).