

Mobile phone repeaters

Proposed changes to the Wireless
Telegraphy (Mobile Repeater) (Exemption)
Regulations 2022

Consultation

Published: 24 October 2023

Closing date for responses: 4 December 2023



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1. Overview

- 1.1 Self-installed repeater devices can sometimes provide a good option for people looking to boost indoor mobile phone signals in places where network coverage is poor. The devices can be installed and used without the need for a wireless telegraphy licence provided they comply with the terms, provisions and limitations set out in the Wireless Telegraphy (Mobile Repeater) (Exemption) Regulations 2022 (the '2022 Regulations').
- 1.2 At present, the 2022 Regulations state that **static indoor repeaters** designed to boost a 4G mobile signal must also repeat a 2G and/or 3G signal, or support the 2G/3G frequency bands used by mobile network operators (MNOs). This is to ensure that a 2G or 3G '999' emergency signal is always available, if needed.
- 1.3 However, the MNOs are starting to switch off their 3G signals to concentrate on delivering 4G and 5G services. We expect them to also switch off their 2G signals in future. As a result, certain repeaters already manufactured and purchased by users on the basis that they are licence-exempt may no longer be able to fulfil the requirements of the 2022 Regulations and will become illegal without a licence (or, in any case, cease operating) through no fault of the manufacturers or users.
- 1.4 For this reason, we have considered whether the requirement in the 2022 Regulations for 4G repeaters to also repeat 2G/3G signals remains necessary and proportionate.
- 1.5 At the same time, we have considered whether to update the technical requirements for **in-vehicle mobile repeaters** to enable them to amplify some 5G signals, reflecting provisions that are already in place for static indoor repeaters.

What we are proposing – in brief

We propose to:

- 1. Remove the requirement for indoor repeaters that boost a 4G signal to also carry a 2G and/or 3G signal or frequency in order to be licence-exempt. This will allow the installation and use of 4G-only repeaters, subject to compliance with the remaining technical conditions included in the licence exemption regulations.
- 2. Update the regulations and associated Interface Requirements to enable in-vehicle mobile repeaters to amplify signals in the 700 MHz band, and to make them technology neutral. This enables them to repeat 5G signals in the bands included in the Interface Requirement.

In proposing these changes, we give formal statutory notice of our intention to make new regulations under the Wireless Telegraphy Act, which amend the 2022 Regulations.

2. Our proposals

- 2.1 This consultation sets out proposals to amend the Wireless Telegraphy (Mobile Repeater) (Exemption) Regulations 2022 (the '**2022 Regulations**'). These set out the terms, provisions and limitations relating to the installation and use of mobile phone repeaters without a wireless telegraphy licence.
- 2.2 In particular, we explain in this section our proposals to:
- a) remove the requirement for 4G static indoor repeaters to also carry a 2G and/or 3G signal; and
 - b) update the terms, provisions and limitations relating to in-vehicle repeaters to enable the amplification of signals in the 700 MHz band, and to make them "technology-neutral".
- 2.3 In Section 3, we then provide notice of our proposal to make new regulations (and update associated interface requirements) to implement the above policy proposals. All our proposals are made by reference to our statutory duties, which are summarised at Annex 5 of this document, alongside a regulatory (and equality) impact assessment.

Our proposals on static indoor repeaters

Background

- 2.4 Although mobile coverage is constantly improving, some people still find it difficult to get a consistently good signal, particularly indoors. In some circumstances, the use of a mobile repeater device can boost a good outdoor signal so it can penetrate more effectively indoors.
- 2.5 Until recently, the use of such devices was unlawful in the UK without a licence from Ofcom because there were concerns about potential interference to networks and other users. But in 2018 Ofcom decided to allow consumers to install and use a limited range of repeaters ('single operator repeaters') to boost the signals of one mobile operator at a time.
- 2.6 This development did not create notable interference issues and we subsequently published a decision in 2021 ([the 'November 2021 statement'](#)) extending the range of static indoor repeaters available for people to buy and install. In particular, we allowed the use of 'provider specific repeaters', and 'multi-operator repeaters', both of which can amplify the frequencies of more than one mobile operator at a time.
- 2.7 In 2018, we had decided not to allow the installation of 4G-only repeaters without a licence. We reaffirmed this decision in 2021 when we extended the scope of the licence exemption. Specifically, we required that: 'single operator'/'provider specific' repeaters can only repeat a 4G signal when a 2G or 3G signal (or both) is also being repeated; and 'multi-operator' repeaters must also repeat the frequency bands used by each Mobile Network Operator's (MNO's) 2G and 3G networks (e.g. 900 MHz, 1800 MHz and 2100 MHz frequency bands).

- 2.8 This was to avoid circumstances where people with certain types of early 4G handsets (non-VoLTE¹ handsets) would be unable to make an emergency call when connected to the network via a repeater.
- 2.9 In both 2018 and in 2021, we recognised that these circumstances would be very rare and there were strong arguments in support of allowing 4G-only repeaters. Notably, it could simplify the design of mobile repeaters, bringing down costs for mobile repeater producers and their customers. Lower costs would encourage people to install legal repeaters instead of the cheap illegal versions that were available on-line (and which do not in any case carry 2G/3G signals).
- 2.10 Although we decided to retain the 2G/3G requirement in 2021, we said we would keep the regulations under review as the MNOs developed their plans to switch off 2G/3G signals in future; and as the number of non-VoLTE handsets in active use fell due to users replacing their handsets with more modern models.
- 2.11 In practice, we understand that manufacturers have generally opted to ensure their repeater devices carry a 3G signal and not 2G, since the 3G frequencies used by the MNOs are closer to the frequencies used more widely for 4G. This keeps the cost of fulfilling the licence exemption requirement to a minimum.

Developments since 2021

- 2.12 The MNOs are starting to switch off their 3G services already. The latest public information we have on the timetables for switch off is published on our website ([switching off the UK's 3G mobile networks](#)).
- 2.13 At the time of publication of this consultation, our understanding is that Vodafone is starting to switch off its 3G network this year (2023), EE plans to switch off in early 2024, Three plans to switch off by the end of 2024, and O2 in 2025.
- 2.14 These timetables may be accelerated further as the network operators concentrate on delivery of 4G and 5G services.
- 2.15 For the moment, three of the four networks will continue to carry 2G signals, although H3G (the operator of the Three network) does not have a 2G network. We expect EE, Vodafone and EE to switch off their own 2G networks in due course. All the MNOs have confirmed to the Government that they do not plan to offer 2G (and 3G) services beyond 2033.
- 2.16 The absence of 2G and/or 3G signals transmitted by the MNOs may make the installation and use of otherwise legal 4G mobile repeaters technically illegal without a licence because of the requirement that they also carry 2G and/or 3G signals. As a result, we have looked again at this aspect of the 2022 Regulations to consider whether it remains necessary and proportionate.

¹ LTE is the name of the technology used by the MNOs' 4G networks. A 'non-VoLTE' handset is a 4G handset without the capability to make voice calls over LTE (broadly those released between about 2012 and 2014). Operators use a technique called circuit switch fallback to force non-VoLTE handsets to switch to their 3G or 2G networks when they make or receive a voice call. There is also the fallback of national roaming for emergency calls, which allows a mobile handset to connect to a different network if there is no coverage from its own network.

Rationale for changing the 2022 Regulations

- 2.17 It is clearly inappropriate for us to continue supporting regulations in circumstances where compliance is not possible in reality. We also have a general duty to keep the carrying out of our functions under review with a view to securing that our regulation does not involve (amongst other things) the maintenance of burdens which have become unnecessary.
- 2.18 Given the upcoming switch off of the 2G and 3G networks, we therefore face a choice of either changing the 2022 Regulations (so as to allow for 4G-only repeaters), or reverting to a position where the installation and use of mobile repeater devices without a licence becomes illegal once again. For reasons set out below, we propose to change the 2022 Regulations.
- 2.19 As noted above, our original thinking was that repeaters needed to carry either a 2G or 3G signal as a precaution to ensure that people with older 4G mobile phones could make an emergency call, in the rare circumstances where this was necessary and there was no other route to making the call.
- 2.20 Leaving aside the impossibility of mobile repeaters carrying signals that are no longer present, our understanding is that the rare circumstances in which emergency services could not be contacted (i.e. when the call needed to be made on a 4G non-VoLTE device) have become even rarer with the passage of time.
- 2.21 When we made the original regulations covering self-installed repeaters in 2018, we were already aware that the number of non-VoLTE devices in circulation was declining. Our decision in 2021 to retain the requirement was marginal, given that it was taken in the knowledge that the number of non-VoLTE devices still being used had fallen even further. It was for that reason that we said we would keep the requirement under review.
- 2.22 Two years on, we note that non-VoLTE devices now represent a legacy technology that was replaced almost a decade ago, and any remaining devices will be at least that old or older. Although a small percentage of people may still *own* one, we consider it reasonable to assume that the number still being *used* is now very small.
- 2.23 Additionally, we note that Wi-Fi calling from inside homes and buildings has become commonplace, with most mobiles now using the option by default for customers in their homes.
- 2.24 In summary, the use of a 4G only repeater might result in users being unable to make a voice call to the emergency services only where ALL of the following factors apply:
- There is a 999 emergency situation;
 - A call needs to be made from *inside* a premises which has a mobile repeater installed;
 - The caller only has access to an early non-VoLTE 4G phone from before about 2014;
 - The phone (or user) is unable to make the call without the signal being boosted by the repeater (e.g. by moving outside the building - or elsewhere inside - where signals might be stronger);
 - The phone is not able (or not set up) to make the call using Wi-Fi;
 - No-one else in the vicinity could make the call on a more modern phone;
 - There is no landline on which the call could be made.

- 2.25 We explained in 2018 that the circumstances in which all of these factors might apply were likely in practice to be infrequent, but we now consider the risk to be very small given the replacement of legacy phones over time.
- 2.26 Additionally, the volume of legal repeaters installed and used across the UK since our regulations were updated in 2022 is not high: we estimate from our inquiries of industry that the number is only in the low tens of thousands out of nearly 30 million households (noting that actual repeater figures for individual manufacturers may be commercially sensitive).
- 2.27 In circumstances where the MNOs will not be carrying 3G signals for much longer anyway (and not 2G signals either in future), we are not persuaded that the requirement for 4G indoor repeaters to also repeat a 2G and/or 3G signal remains objectively justified and proportionate. Accordingly, we are proposing to remove this requirement (i.e. we would allow 4G-only mobile repeaters to be installed and used).

Option to carry 2G signals

- 2.28 We have considered whether we should continue to require mobile repeaters to carry a 2G signal or frequency instead of a 3G signal or frequency, where 3G has been switched off. This could mitigate the (very small) risk discussed above that the use of 4G-only repeaters might result in users being unable to make a voice call to the emergency services.
- 2.29 However, for the reasons set out below (and taking account of our view above that this risk is now very small given the replacement of legacy phones over time), we are not persuaded that this would be appropriate and proportionate.
- 2.30 As noted above, we understand that manufacturers of licence-exempt repeaters have generally opted to configure their products to carry 3G rather than 2G, because the frequencies used are closer to the 4G frequencies most customers are seeking to boost, making it simpler and less costly than carrying 2G.
- 2.31 Having made the 2022 Regulations giving them this option less than two years ago, it appears to us to be disproportionate to now require that the products manufactured, installed and in use under those regulations now need to be replaced or reconfigured to remain licence-exempt.
- 2.32 We note that the rare factors that would all need to occur at the same time for there to be an issue with an emergency call apply equally to 2G use as to 3G use. In any case, as noted, there remains an expectation that the 2G signals will themselves be switched off by the MNOs in due course.
- 2.33 We are also mindful that the cost of legal repeaters remains high compared to illegal alternatives. To add to – rather than remove – the burden of compliance for legal repeaters that do not risk interference appears to us to be counter-productive, and we are concerned that this would simply increase incentives for people to install cheaper illegal repeaters.

Our proposals on in-vehicle mobile repeaters

- 2.34 In 2018, at the same time as we allowed for the licence-exempt installation and use of a limited range of indoor repeaters, we also allowed for the installation and use of a limited range of in-vehicle repeaters. The terms, provisions and limitations applicable to such

repeaters are also currently set out in the 2022 Regulations (specifically, at regulation 18) and in an associated Interface Requirement – [IR2102](#).

- 2.35 In our November 2021 statement we said that, following the award of the 700 MHz band (in particular the two blocks of paired spectrum, 703-733 MHz delivering uplink and 758-788 MHz delivering downlink) it was appropriate to include this band for use by static indoor repeaters. We therefore included this band in the 2022 Regulations, as well as IR2102.1 and IR2102.3.
- 2.36 We also proposed to make the regulations technology neutral insofar as they relate to indoor repeaters. This would allow for the use of indoor 5G repeaters on a licence-exempt basis. To do this, we amended the definition of “mobile repeater device” so that it was not defined by reference to 2G, 3G and 4G technologies, and made the power limits in respect of indoor mobile repeaters technology neutral.
- 2.37 At the time, we did not consider any updates to the licence-exemption rules relating to in-vehicle mobile repeaters. As such in-vehicle mobile repeaters are not currently able, under the 2022 Regulations, to amplify the 700 MHz band. They are also required by regulation 18(2) of the 2022 Regulations to only amplify signals carried over a GSM system, a LTE system, a UMTS system or a WiMAX system; they cannot amplify 5G signals.
- 2.38 However, the reasoning and evidence we set out for including the 700 MHz band for indoor mobile repeaters and for making our licence-exemption regulations technology neutral is equally valid for in-vehicle mobile repeaters. We are therefore proposing to enable the use of mobile in-vehicle repeaters in the 700 MHz band by amending the 2022 Regulations and associated Interface Requirement.
- 2.39 In line with the November 2021 statement, we are proposing that the power limits applicable in respect of in-vehicle repeaters that amplify the 800 MHz band should apply equally to those which amplify the 700 MHz band. We are also proposing to make the in-vehicle licence exemption rules technology neutral.

Our provisional assessment

- 2.40 For the reasons set out in this document, our provisional assessment is that our proposals are consistent with our statutory duties and the proposed terms, provisions and limitations would meet the requirements of section 8(4) of the WT Act.
- 2.41 In our view, the proposals set out in this document are:
- a) objectively justified in that they would remove a requirement (i.e., the prohibition on 4G-only indoor repeaters) which we consider is no longer objectively justified nor proportionate, and would align the rules in respect of in-vehicle mobile repeaters with those for static indoor repeaters (thereby allowing for the use of in-vehicle repeaters which amplify some 5G signals);
 - b) not unduly discriminatory against particular persons or against a particular description of persons in that they would apply to all users of relevant repeaters (and, indirectly, to all manufacturers and sellers);
 - c) proportionate to what they are intended to achieve, in that they would remove requirements which we consider are no longer proportionate (specifically, the prohibition on 4G-only repeaters), and allow for the licence-exempt use of in-vehicle

- repeaters which amplify some 5G signals (provided that they meet the remaining terms, provisions and limitations). They do not however go any further than this; and
- d) transparent in relation to what they are intended to achieve, in that they would be clear on the face of the revised interface requirements and the amended 2022 Regulations (which we discuss below), in addition to being described and explained in this document.

3. Notice of proposed regulations

- 3.1 This section sets out proposals to make regulations giving effect to our proposed changes to how mobile repeaters may be installed and used, as outlined in full in the previous section (section 2). As such, it represents formal statutory notice of our intention to make those regulations.
- 3.2 To give effect to the proposals set out in Section 2 of this consultation, we are proposing to:
- a) make new regulations, the Wireless Telegraphy (Mobile Repeater) (Exemption) (Amendment) Regulations 2023 - the '**Proposed Regulations**' - which amend the 2022 Regulations. A copy of the Proposed Regulations is at Annex 6 of this consultation. We explain below the general effect of the Proposed Regulations, as required by section 122(5) of the WT Act; and
 - b) amend the relevant interface requirements (specifically, IR2102.1, IR 2102.2 and IR 2102.3). We also explain below the changes that we are proposing to make to these interface requirements.

General effect of the Proposed Regulations

Territorial extent

- 3.3 The Proposed Regulations would apply in the United Kingdom, the Channel Islands and the Isle of Man, subject to formal agreement of the Crown Dependencies.

General effect of the Proposed Regulations

Indoor repeaters: Removal of the prohibition on 4G-only repeaters

- 3.4 The Proposed Regulations would:
- a) remove regulations 9 and 13 of the 2022 Regulations. This would have the effect of removing the requirement for indoor repeaters that amplify 4G signals to also amplify 2G and/or 3G signals; and
 - b) amend regulation 4(b) of the 2022 Regulations to remove the reference to regulation 13 (as that regulation would no longer exist).

In-vehicle repeaters: Making the licence-exemption technology-neutral

- 3.5 The Proposed Regulations would remove Regulation 18(2) of the 2022 Regulations. This would have the effect of removing the current requirement that licence-exempt in-vehicle repeaters only amplify 2G, 3G or 4G signals, making the regulations applicable to in-vehicle repeaters technology neutral. This would therefore allow for the licence-exempt use of 5G in-vehicle repeaters, provided that those repeaters comply with all applicable terms, provisions and limitations set out in the 2022 Regulations.

In-vehicle repeaters: Definition of “IR 2102.2”

- 3.6 The Proposed Regulations would implement Ofcom’s proposal to update the technical requirements for the in-vehicle use of certain mobile phone repeaters by amending the definition of “IR 2102.2” in regulation 3(o) of the 2022 Regulations. This would update the publication date of the current version of IR 2102.2 from 26th May 2022 to a new date, following any amendments which are made to those interface requirements as a result of this consultation.
- 3.7 If regulation 3(o) of the 2022 Regulations is amended as proposed, this would have the effect of:
- a) changing the scope of the current licence exemption to include the 700 MHz band (703-733 MHz uplink, and 758-788 MHz downlink) in the list of licence-exempt frequency bands;
 - b) requiring that amplification of the 700 MHz band by an in-vehicle repeater is subject to the terms, provisions and limitations already applicable to in-vehicle repeaters (including the power limits already applicable in respect of the 800 MHz band); and
 - c) making the power limits relating to amplification of frequencies in the 900 and 1800 MHz bands “technology neutral”.
- 3.8 In-vehicle devices that do not meet the revised interface requirements would not fall within the licence exemption. As such, their establishment, installation and use without a licence would be a criminal offence.

Proposed changes to Interface Requirements

- 3.9 Our proposed changes also mean the removal of associated clauses in the [UK Interface Requirement 2102](#) as follows.

Indoor repeaters

- 3.10 For provider-specific repeaters, our proposal would mean the removal of the following text from **IR 2102.1**.

“The deployment of a 4G only provider-specific static mobile phone repeater is not permitted. When amplifying a 4G signal licensed to a mobile network operator, all provider-specific static mobile phone repeaters must also amplify a 2G and/or a 3G signal licensed to that mobile network operator”.

- 3.11 And for multi-operator repeaters, our proposal would mean the removal of the following text from **IR 2102.3**.

“All multi-operator static mobile phone repeaters must transmit the entirety of the 900, 1800 and 2100 frequency bands as defined in **Mandatory 3**.

This requirement ensures that the 2G/3G layers of all MNOs are repeated by the multi-operator repeater, ensuring that 4G-only hotspots are not created in premises using a licence-exempt repeater”.

In-vehicle repeaters

- 3.12 We propose to make the following changes to **IR 2102.2**:

- a) add the following frequencies to the row entitled “Frequency Band” (additions highlighted in yellow):

Frequency band	700 703-733 MHz (Uplink) 758-788 MHz (Downlink)
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- b) make the changes highlighted below in yellow to Table A2

Band	Technology	Maximum Uplink Power	Maximum Downlink power (in-vehicle use only)
700 & 800	TechnologyNeutral	23 dBm TRP	PSD 10 dBm / 5 MHz TRP; andTotal 17 dBm TRP
900	GSM	33 dBm TRP	10 dBm TRP
1800	GSM	30 dBm TRP	10 dBm TRP
900, 1800 & 2100	3G	24 dBm TRP	PSD: 10 dBm / 5 MHz TRP; andTotal: 17 dBm TRP
900 & 1800	TechnologyNeutral (excluding GSM & 3G)LTE & WIMAX	23 dBm TRP	PSD: 10 dBm / 5 MHz TRP; andTotal: 17 dBm TRP
2100	TechnologyNeutral	24 dBm TRP	PSD: 10 dBm / 5 MHz TRP; andTotal: 17 dBm TRP
2600	TechnologyNeutral	23 dBm TRP	PSD: 10 dBm / 5 MHz TRP; andTotal: 17 dBm TRP
Where PSD is power spectral density			

Implications for Voluntary Testing Standard

- 3.13 In order to help the public identify repeaters that can be used ‘legally’ without a licence – rather than ‘illegal’ devices that risk causing interference to networks or other users – we publish on our website a [list of devices](#) that we understand comply with the technical requirements of our licence exemption regime.

- 3.14 To be clear, Ofcom does not endorse or approve particular products. Instead, the list simply identifies devices that have been subjected to testing by an accredited test house to show they meet our technical requirements, using a [voluntary testing standard](#) (VTS).
- 3.15 The current requirements of the VTS include stipulations that repeaters designed to boost a 4G mobile signal must also repeat a 2G and/or 3G signal, or support 2G/3G frequency bands.
- 3.16 If we decide to proceed with the proposals set out in this consultation, following consideration of any responses we receive, the 2G/3G requirements included in the VTS will be amended as appropriate.

Consultation process

- 3.17 We invite comments on the proposals set out in this consultation, including our proposal to make the Wireless Telegraphy (Mobile Repeater) (Exemption) (Amendment) Regulations 2024. Our consultation opens on **24 October 2023** and closes on **4 December 2023**.

- 3.18 We invite stakeholders to respond, in particular, to the following questions:

Consultation question:

1. Do you agree with our proposal to remove the requirement for licence-exempt indoor mobile repeaters to carry a 2G and/or 3G signal? If not, please set out your reasons with any supporting evidence.
2. Do you agree with our proposals to amend the 2022 Regulations and associated Interface Requirements to align the use of in-vehicle mobile repeaters with the provisions for use of indoor repeaters? If not, please set out your reasons with any supporting evidence.

- 3.19 Subject to our consideration of responses, we intend to bring the Proposed Regulations into force in early 2024. A regulatory impact assessment for the Proposed Regulations and new licence arrangements will accompany the making of the regulations.

A1 Responding to this consultation

How to respond

- A1.1 Ofcom would like to receive views and comments on the issues raised in this document, by 5pm on **4 December 2023**.
- A1.2 You can download a response form from <https://www.ofcom.org.uk/consultations-and-statements/category-3/mobile-phone-repeaters>. You can return this by email or post to the address provided in the response form.
- A1.3 If your response is a large file, or has supporting charts, tables or other data, please email it to mail to: mobilephonerepeaters@ofcom.org.uk, as an attachment in Microsoft Word format, together with the cover sheet.
- A1.4 Responses may alternatively be posted to the address below, marked with the title of the consultation:
- Mobile Repeaters Consultation,
Spectrum Group,
Ofcom
Riverside House
2A Southwark Bridge Road
London SE1 9HA
- A1.5 We welcome responses in formats other than print, for example an audio recording or a British Sign Language video. To respond in BSL:
- send us a recording of you signing your response. This should be no longer than 5 minutes. Suitable file formats are DVDs, wmv or QuickTime files; or
 - upload a video of you signing your response directly to YouTube (or another hosting site) and send us the link.
- A1.6 We will publish a transcript of any audio or video responses we receive (unless your response is confidential)
- A1.7 We do not need a paper copy of your response as well as an electronic version. We will acknowledge receipt of a response submitted to us by email.
- A1.8 You do not have to answer all the questions in the consultation if you do not have a view; a short response on just one point is fine. We also welcome joint responses.
- A1.9 It would be helpful if your response could include direct answers to the questions asked in the consultation document. The questions are listed at Annex X. It would also help if you could explain why you hold your views, and what you think the effect of Ofcom's proposals would be.
- A1.10 If you want to discuss the issues and questions raised in this consultation, please contact us by email to mobilephonerepeaters@ofcom.org.uk.

Confidentiality

- A1.11 Consultations are more effective if we publish the responses before the consultation period closes. This can help people and organisations with limited resources or familiarity with the issues to respond in a more informed way. So, in the interests of transparency and good regulatory practice, and because we believe it is important that everyone who is interested in an issue can see other respondents' views, we usually publish responses on the Ofcom website at regular intervals during and after the consultation period.
- A1.12 If you think your response should be kept confidential, please specify which part(s) this applies to and explain why. Please send any confidential sections as a separate annex. If you want your name, address, other contact details or job title to remain confidential, please provide them only in the cover sheet, so that we don't have to edit your response.
- A1.13 If someone asks us to keep part or all of a response confidential, we will treat this request seriously and try to respect it. But sometimes we will need to publish all responses, including those that are marked as confidential, in order to meet legal obligations.
- A1.14 To fulfil our pre-disclosure duty, we may share a copy of your response with the relevant government department before we publish it on our website.
- A1.15 Please also note that copyright and all other intellectual property in responses will be assumed to be licensed to Ofcom to use. Ofcom's intellectual property rights are explained further in our Terms of Use.

Next steps

- A1.16 Following this consultation period, Ofcom plans to publish a statement in early 2024.
- A1.17 If you wish, you can register to receive mail updates alerting you to new Ofcom publications.

Ofcom's consultation processes

- A1.18 Ofcom aims to make responding to a consultation as easy as possible. For more information, please see our consultation principles in Annex x.
- A1.19 If you have any comments or suggestions on how we manage our consultations, please email us at consult@ofcom.org.uk. We particularly welcome ideas on how Ofcom could more effectively seek the views of groups or individuals, such as small businesses and residential consumers, who are less likely to give their opinions through a formal consultation.
- A1.20 If you would like to discuss these issues, or Ofcom's consultation processes more generally, please contact the corporation secretary:
- A1.21 Corporation Secretary
Ofcom
Riverside House
2a Southwark Bridge Road
London SE1 9HA
Email: corporationsecretary@ofcom.org.uk

A2 Ofcom's consultation principles

Ofcom has seven principles that it follows for every public written consultation:

Before the consultation

A2.1 Wherever possible, we will hold informal talks with people and organisations before announcing a big consultation, to find out whether we are thinking along the right lines. If we do not have enough time to do this, we will hold an open meeting to explain our proposals, shortly after announcing the consultation.

During the consultation

A2.2 We will be clear about whom we are consulting, why, on what questions and for how long.

A2.3 We will make the consultation document as short and simple as possible, with an overview of no more than two pages. We will try to make it as easy as possible for people to give us a written response.

A2.4 We will consult for up to ten weeks, depending on the potential impact of our proposals.

A2.5 A person within Ofcom will be in charge of making sure we follow our own guidelines and aim to reach the largest possible number of people and organisations who may be interested in the outcome of our decisions. Ofcom's Consultation Champion is the main person to contact if you have views on the way we run our consultations.

A2.6 If we are not able to follow any of these seven principles, we will explain why.

After the consultation

A2.7 We think it is important that everyone who is interested in an issue can see other people's views, so we usually publish the responses on our website at regular intervals during and after the consultation period. After the consultation we will make our decisions and publish a statement explaining what we are going to do, and why, showing how respondents' views helped to shape these decisions.

A3 Consultation coversheet

Basic details

Consultation title:

To (Ofcom contact):

Name of respondent:

Representing (self or organisation/s):

Address (if not received by email):

Confidentiality

Please tick below what part of your response you consider is confidential, giving your reasons why

- Nothing
- Name/contact details/job title
- Whole response
- Organisation
- Part of the response

If you selected 'Part of the response', please specify which parts:

If you want part of your response, your name or your organisation not to be published, can Ofcom still publish a reference to the contents of your response (including, for any confidential parts, a general summary that does not disclose the specific information or enable you to be identified)?

Yes No

Declaration

I confirm that the correspondence supplied with this cover sheet is a formal consultation response that Ofcom can publish. However, in supplying this response, I understand that Ofcom may need to publish all responses, including those which are marked as confidential, in order to meet legal obligations. If I have sent my response by email, Ofcom can disregard any standard e-mail text about not disclosing email contents and attachments.

Ofcom aims to publish responses at regular intervals during and after the consultation period. If your response is non-confidential (in whole or in part), and you would prefer us to publish your response only once the consultation has ended, please tick here.

Name

Signed (if hard copy)

A4 Consultation questions

Consultation questions:

1. Do you agree with our proposal to remove the requirement for licence-exempt indoor mobile repeaters to carry a 2G and/or 3G signal? If not, please set out your reasons with any supporting evidence.
2. Do you agree with our proposals to amend the 2022 Regulations and associated Interface Requirements to align the use of in-vehicle mobile repeaters with the provisions for use of indoor repeaters? If not, please set out your reasons with any supporting evidence.

A5 Legislative framework and impact assessment

A5.1 In this Annex, we set out:

- a) a summary of the relevant legislative framework; and
- b) a provisional impact assessment regarding the proposals set out in this consultation, including an equality impact assessment.

Legislative framework

A5.2 As explained below, Ofcom is responsible for authorising the use of the radio spectrum. In doing so, it must act in accordance with section 8 of the Wireless Telegraphy Act 2006 (the “WTA”), which sets out its specific powers and duties in relation to the licensing (and licence exemption) of wireless telegraphy apparatus. When exercising its spectrum management functions, Ofcom also has a number of more general statutory duties under the Communications Act 2003 (the “2003 Act”) and WTA.

Ofcom’s role in authorising the use of radio spectrum

A5.3 In the UK, Ofcom is responsible for authorising use of the radio spectrum. We permit the use of the radio spectrum either by granting wireless telegraphy licences under the WTA or by making regulations exempting the use of particular equipment from the requirement to hold such a licence.

A5.4 Under section 8(1) of the WTA, it is unlawful (i.e. a criminal offence) to establish or use a wireless telegraphy station or install or use wireless telegraphy apparatus except under and in accordance with a wireless telegraphy licence granted under the WTA.

A5.5 Under section 8(3) of the WTA, Ofcom may make regulations exempting from the licensing requirements under section 8(1) the establishment, installation or use of wireless telegraphy stations or wireless telegraphy apparatus of such classes or description as may be specified in the regulations, either absolutely or subject to such terms, provisions and limitations as may be specified.

A5.6 Ofcom may only approve regulations under section 8(3) within the limits set out in section 8(3B). In particular, the latter requires that section 8(3) exemptions must be:

- a) objectively justifiable in relation to the wireless telegraphy stations or wireless telegraphy apparatus to which they relate;
- b) not such as to discriminate unduly against particular persons or against a particular description of persons;
- c) proportionate to what they are intended to achieve; and
- d) transparent in relation to what they are intended to achieve.

A5.7 Further, under section 8(4) of the WTA, we must make regulations to exempt equipment from the requirement for a licence if its installation or use is not likely to:

- a) involve undue interference with wireless telegraphy;

- b) have an adverse effect on technical quality of service;
 - c) lead to inefficient use of the part of the electromagnetic spectrum available for wireless telegraphy;
 - d) inhibit the development of effective arrangements for the sharing of frequencies;
 - e) endanger safety of life;
 - f) prejudice the promotion of social, regional or territorial cohesion; or
 - g) prejudice the promotion of cultural and linguistic diversity and media pluralism.
- A5.8 We make exemption regulations by means of a statutory instrument. Before making any such regulations, we are required by section 122(4) of the WTA to give notice of our proposal to do so. Under section 122(5), the notice must state that we propose to make the regulations in question, set out their general effects, specify an address from which a copy of the proposed regulations may be obtained, and specify a time period of at least one month during which any representations with respect to the proposal must be made to us.

Ofcom's wider statutory duties

- A5.9 Our principal duties under the 2003 Act, when carrying out our functions and exercising our powers, are to further the interests of citizens in relation to communications matters, and to further the interests of consumers in relevant markets, where appropriate by promoting competition. These duties apply when Ofcom is carrying out its spectrum management functions.
- A5.10 In doing so, we are also required (among other things) to secure the optimal use of spectrum and the availability throughout the United Kingdom of a wide range of electronic communications services.
- A5.11 We must also have regard to, amongst other things:
- a) the desirability of promoting competition in relevant markets;
 - b) the desirability of encouraging investment and innovation in relevant markets;
 - c) the desirability of encouraging the availability and use of high speed data transfer services throughout the United Kingdom;
 - d) the different needs and interests, so far as the use of the electro-magnetic spectrum for wireless telegraphy is concerned, of all persons who may wish to make use of it; and
 - e) the different interests of persons in the different parts of the United Kingdom, of the different ethnic communities within the United Kingdom and of persons living in rural and in urban areas.
- A5.12 The 2003 Act also sets out certain regulatory principles which we must have regard to when performing our duties. Specifically, regulatory activities should be transparent, accountable, proportionate, consistent, and targeted only at cases in which action is needed.
- A5.13 Section 6 of the 2003 Act also provides that Ofcom must keep the carrying out of its functions under review with a view to securing that regulation by it does not involve: (a) the imposition of burdens which are unnecessary; or (b) the maintenance of burdens which have become unnecessary.
- A5.14 In carrying out our spectrum functions, we also have a duty under section 3 of the WTA to have regard in particular to: (i) the extent to which the spectrum is available for use, or further use, for wireless telegraphy; (ii) the demand for use of that spectrum for wireless telegraphy; and (iii) the demand that is likely to arise in future for such use.

A5.15 We also have a duty to have regard to the desirability of promoting: (i) the efficient management and use of the spectrum for wireless telegraphy; (ii) the economic and other benefits that may arise from the use of wireless telegraphy; (iii) the development of innovative services; and (iv) competition in the provision of electronic communications services.

Radio Equipment Regulations

A5.16 Radio equipment, including mobile phone repeaters, has to comply with requirements derived from Directive 2014/53/EU on radio equipment (the “RED”), which came into force on 13 June 2016. The UK implemented the RED into UK law through the Radio Equipment Regulations 2017 (the “RER Regulations”) and it now therefore constitutes retained EU law.

A5.17 One requirement of this regime is that radio equipment may only be placed on the market and put into service where it meets certain essential requirements. These include that it must be constructed such that it uses the relevant radio spectrum so as to avoid harmful interference.

A5.18 One way in which these requirements may be satisfied is by meeting an applicable ‘harmonised’ or ‘designated’ standard (as applicable).¹⁶ Meeting such a standard gives rise to a presumption of conformity with the requirements. Some of the standards contained in the RER Regulations apply to certain types of mobile phone repeater.

A5.19 We note however that even mobile phone repeaters which meet one of the harmonised or designated standards (as applicable) may be liable to cause undue interference and/or adverse effects on technical quality of service if they are installed by consumers rather than by MNOs as part of their planned network installation. In the absence of licence exemption by Ofcom, they cannot therefore be used in the UK without a wireless telegraphy licence. In order for consumers to use self-installed repeaters on a licence-exempt basis, Ofcom may identify a set of technical requirements which are additional to those in the relevant harmonised or designated standards.

Impact assessment

A5.20 Section 7 of the 2003 Act requires that, where we are proposing to do anything for the purposes of, or in connection with, the carrying out of our functions, and it appears to us that the proposal is important, we are required to carry out and publish an assessment of the likely impact of implementing the proposal, or a statement setting out our reasons for thinking that it is unnecessary to carry out such an assessment.

A5.21 To do this, we have considered the impact of our proposals as against a counterfactual of doing nothing (i.e. not amending the 2022 Regulations).

Impact on citizens and consumers

A5.22 For the reasons set out in this consultation, and summarised below, our provisional view is that our proposals would benefit UK consumers as against a counterfactual of doing nothing.

- a) Our proposal to allow for 4G-only repeaters should mean that mobile repeaters may continue to be installed and used without a wireless telegraphy licence when the MNOs

switch off their 2G and 3G networks. If we do not adopt these proposals, we are concerned that consumers will be unable to install and use 4G repeaters without a licence, and that they will therefore commit a criminal offence. This could adversely impact the interests of citizens and consumers and discourage the availability and use of high speed data transfer, particularly impacting those in rural areas with poorer mobile signals.

- b) We recognise that the 2022 Regulations currently prohibit the installation and use of 4G-only repeaters in order to reduce the risk that the use of a mobile repeater might result in individuals being unable to make emergency calls. However, as described in paragraphs 2.17 to 2.27 of this consultation, the circumstances in which the use of a repeater would prevent an individual from making an emergency call are very rare. Our provisional view is that it is therefore very unlikely that the use of a 4G-only repeater would endanger safety of life, and that it would be disproportionate to retain the current prohibition of 4G-only repeaters on this basis.
- c) Our proposals in relation to in-vehicle repeaters should also further the interests of citizens and consumers by enabling the licence-exempt use of in-vehicle repeaters where 5G signal is poor, which is likely to become increasingly important in future as MNOs start to roll out their 5G networks. This should be particularly beneficial for those in rural areas or those with otherwise poor mobile coverage.

Impact on manufacturers

A5.23 For the reasons set out in this consultation, and summarised below, our provisional view is that our proposals would benefit the manufacturers of mobile repeaters as against a counterfactual of doing nothing.

- a) Our proposal to allow for 4G-only repeaters will enable manufacturers to continue making and selling 4G repeaters on a licence-exempt basis in the UK, as was the intention in our original decision to permit the installation and use of these devices. This should allow for competition and innovation in this sector, reducing the regulatory burden. If we do nothing, manufacturers would (following the switch off of the MNOs' 2G and 3G networks) be unable to make and sell 4G repeaters on a licence-exempt basis in the UK, adversely impacting competition and innovation in this sector. The 2022 Regulations would also appear (on their face) to allow for the licence-exempt installation and use of 4G repeaters, despite manufacturers and users being unable in practice to comply with the terms of the licence exemption; we are concerned that this could undermine confidence in Ofcom's regulation.
- b) Our proposals in relation to in-vehicle repeaters should also benefit the manufacturers of mobile repeaters, by enabling them to start making and selling licence-exempt repeaters that amplify some important 5G frequencies (namely, the 700 MHz band). Without doing this, manufacturers would remain unable to innovate and compete in the production of licence-exempt repeaters that amplify this specific band.

Impact on other businesses

A5.24 Our provisional view is that there will be no negative impact from any of our proposals on any other businesses. Enabling the continued use and installation of repeaters on a licence-

exempt basis is likely to discourage consumers from using illegal devices that might cause harmful interference.

Equality impact assessment

- A5.25 Ofcom is also required by statute to assess the potential impact of all its functions, policies, projects and practices on the following equality groups: age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex and sexual orientation. Equality Impact Assessments (EIAs) also assist us in making sure that we are meeting our principal duty of furthering the interests of citizens and consumers regardless of their background or identity.
- A5.26 The proposals set out in this document will apply equally to all users of mobile phone repeaters. We have not identified any differential impact of our proposals in relation to the identified equality groups and, in our assessment, they would not disproportionately affect any group of consumers.

A6 Draft Statutory Instrument

DRAFT – FOR CONSULTATION PURPOSES ONLY

[D R A F T] S T A T U T O R Y I N S T R U M E N T S

2024 No.0000

ELECTRONIC COMMUNICATIONS

The Wireless Telegraphy (Mobile Repeater) (Exemption) (Amendment) Regulations 2024

Made [Alongside final policy statement]

Coming into force [Three weeks after they are made]

The Office of Communications (“OFCOM”) make the following Regulations in exercise of the powers conferred by section 8(3) and section 122(7) of the Wireless Telegraphy Act 2006(a) (the “Act”) and in exercise of those sections of the Act as extended to the Bailiwick of Guernsey, to the Bailiwick of Jersey and to the Isle of Man(b).

Before making these Regulations, OFCOM gave notice of their proposal to do so in accordance with section 122(4)(a) of the Act, published notice of their proposal in accordance with section 122(4)(b) of the Act, and have considered representations made to them before the time specified in that notice in accordance with section 122(4)(c) of the Act.

Citation and commencement

1. These Regulations may be cited as the Wireless Telegraphy (Mobile Repeater) (Exemption) (Amendment) Regulations [2024] and shall come into force on [three weeks after they are made].

Amendment of the Wireless Telegraphy (Mobile Repeater) (Exemption) Regulations 2022

2.—(1) The Wireless Telegraphy (Mobile Repeater) (Exemption) Regulations 2022(c) are amended in accordance with paragraphs (2) to (6).

(2) In regulation 3 (interpretation), at the end of paragraph (o), for “26th May 2022” substitute “[date of new Interface Requirement]”.

(3) In regulation 4 (scope of exemption for indoor use), at the end of paragraph (b) for “regulations 13 to 17” substitute “regulations 14 to 17”.

(4) Omit regulation 9 (frequencies to be amplified).

(5) Omit regulation 13 (frequencies that must be amplified).

(6) Omit paragraph (2) of regulation 18 (scope of exemption for use in a motor vehicle).

(a) 2006 c. 36.

(b) Section 8(3) and section 122(7) were extended to the Bailiwick of Guernsey by article 2 of the Wireless Telegraphy (Guernsey) Order 2006 (S.I. 2006/3325); to the Bailiwick of Jersey by article 2 of the Wireless Telegraphy (Jersey) Order 2006 (S.I. 2006/3324); and to the Isle of Man by article 2 of the Wireless Telegraphy (Isle of Man) Order 2007 (S.I. 2007/278).

(c) 2022 c. 595.