
Regulatory Impact Assessment

The Wireless Telegraphy (Mobile Repeater)
(Exemption) Regulations 2022

1. Regulatory Impact Assessment

Introduction

- 1.1 In accordance with Government practice, Ofcom undertakes a Regulatory Impact Assessment (“**RIA**”) when a statutory regulation is made. We also comply with our duty under section 7 of the Communications Act 2003 (the “**2003 Act**”) to undertake impact assessments.
- 1.2 The analysis in this document is a regulatory impact assessment relating to the Wireless Telegraphy (Mobile Repeater) (Exemption) Regulations 2022 (the “**Regulations**”). It is consistent with the Government practice on RIAs and Ofcom’s duty under the 2003 Act.
- 1.3 Regulatory impact assessments are a key tool in delivering better regulation and provide a valuable way of assessing different options for regulation. They form part of best practice policy-making. This is reflected in section 7 of the 2003 Act, which imposes a duty on Ofcom to carry out impact assessments where our decisions would be likely to have a significant effect on businesses or the general public, or when there is a major change in our activities.
- 1.4 As a matter of policy, we are committed to carrying out and publishing impact assessments in relation to the vast majority of our policy decisions. For further information about our approach to impact assessments, see the guidelines, Better policy-making: Ofcom’s approach to impact assessment, which are on our website:
http://www.ofcom.org.uk/consult/policy_making/guidelines.pdf.

The issue being considered

- 1.5 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.
- 1.6 In 2018, Ofcom decided to allow people to install and use a limited range of static indoor mobile repeaters (“**single operator repeaters**”) to boost the signals of one mobile operator at a time without the need for a licence. It did so by making the Wireless Telegraphy (Mobile Repeater) (Exemption) Regulations 2018 (the “**2018 Regulations**”).
- 1.7 This RIA considers the Regulations, which extend the range of static indoor mobile repeaters available for people to buy and install themselves without a licence to include devices that boost the signals of more than one mobile operator at a time – namely ‘provider specific’ and ‘multi-operator repeaters’.¹

¹ For completeness, we note that the 2018 Regulations also allowed people to install and use a limited range of mobile phone repeaters for use in a vehicle. Whilst the 2018 Regulations are being revoked by the Regulations, no changes are

Relevant legislative framework

1.8 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 “**2006 Act**”), 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 2003 Act and 2006 Act.

Ofcom’s role in authorising the use of radio spectrum

1.9 In the UK, Ofcom is responsible for authorising the use of the radio spectrum. We permit the use of the radio spectrum either by granting wireless telegraphy licences under the 2006 Act or by making regulations exempting the users of particular equipment from the requirement to hold such a licence.

1.10 Under section 8(1) of the 2006 Act, it is unlawful (a criminal offence) to establish or use a wireless telegraphy station or install or use wireless telegraphy apparatus without holding a licence granted by us, unless the establishment, installation or use (for ease of reference, the ‘deployment’) of such equipment is exempted from the need for a licence. We can exempt the deployment of wireless telegraphy stations and apparatus by making statutory regulations under section 8(3) of the 2006 Act. Such exemption may be absolute or subject to such terms, provisions and limitations as may be specified.

1.11 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 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) in relation to what they are intended to achieve, transparent.

1.12 Further, under section 8(4) of the 2006 Act, Ofcom is required to make regulations to exempt specific equipment from the requirement for a licence if its installation or use meets the requirements set out in section 8(5). Namely, that it 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;

being made to the substance of the rules regarding in-vehicle repeaters, which are simply being replicated in the Regulations.

- 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.

Ofcom's wider statutory duties

- 1.13 Ofcom's principal duties under section 3(1) of the 2003 Act 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.
- 1.14 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.
- 1.15 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.
- 1.16 In carrying out our spectrum functions, we also have a duty under section 3 of the 2006 Act 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.
- 1.17 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.

Proposal and decision

- 1.18 At present, the use of a static mobile phone repeater for indoor use is only authorised if it is:

- a) supplied and operated under the control of a mobile network operator (under its Wireless Telegraphy licence); or
 - b) a ‘single operator’ repeater, which is exempt from the requirement for a wireless telegraphy licence as a result of the 2018 Regulations.
- 1.19 The use of any other consumer (self) installed repeaters for indoor use is unlawful. However, such repeaters are sometimes used (often without a real appreciation by the consumer that the use of the device they buy is unlawful). Typically, these are crude wideband amplifiers that can cause harm to the mobile operators’ networks and therefore to other consumers. The interference or other adverse effects on the technical quality of service caused by the unlawful use of such wideband repeaters remains one of the categories of complaint most reported to Ofcom. We have a duty to secure efficient use of the spectrum and we have, and use, powers to enforce against unlawful use.
- 1.20 In 2021, Ofcom consulted on and made a policy decision to extend the range of static indoor mobile repeaters available for people to buy and install themselves without a wireless telegraphy licence (under certain conditions) to include devices that boost the signals of more than one mobile operator at a time – namely ‘provider specific’ and ‘multi-operator repeaters’. We made the Regulations to give effect to this decision.

Ofcom’s policy objective

- 1.21 We seek wherever possible, to reduce the regulatory burden upon our stakeholders, in this instance users of the radio spectrum. One way in which we can do this is to remove the need for spectrum users to apply for individual licences to authorise the use of radio equipment. Exemption is realised by describing the details of equipment and the parameters under which it may be used in a Statutory Instrument (secondary legislation called regulations) that exempts users of such equipment from the need to hold a licence provided they comply with the terms of the regulations.
- 1.22 In May 2021 we published a [public consultation](#) outlining proposals to extend the range of static indoor repeaters available for people to buy and install themselves without a licence. Having considered stakeholder responses, we published a [statement](#) in November 2021 (the “**November Policy Statement**”) setting out our decision to proceed with exemption regulations to allow the use of provider specific and multi-operator repeaters. In March 2022, whilst consulting on draft regulations to give effect to this policy decision, we also consulted on the policy of making our exemption regulations for static indoor repeaters technology neutral (thereby allowing for, amongst other things, the possibility of 5G mobile repeaters)². Stakeholder responses were generally supportive of this proposal, or did not comment on it, and we therefore published our decision to proceed with technology neutral exemption regulations for static indoor repeaters on [27 May 2022 \(the “May Final Statement”\)](#).

² See [Consultation: Notice of proposal to make the Wireless Telegraphy \(Mobile Repeater\) \(Exemption\) Regulations 2022 - Ofcom](#).

- 1.23 The Regulations give effect to these policy decisions.
- 1.24 Our regulatory policy objective in this area is to facilitate the ability of consumers to improve their mobile coverage within the home (and other indoor premises), without giving rise to the risk of the kinds of deleterious effects described in our 2021 consultation and our November Policy Statement. We seek to facilitate the provision of a service to a consumer in the home (and other indoor premises) that is equivalent to that available outdoors at the same location.
- 1.25 This is just one of a number of different initiatives Ofcom is undertaking to support improved mobile coverage in general.
- 1.26 We also take account that, in accordance with the 2006 Act, we must exempt from licensing the deployment of specified equipment that meets the requirements of sections 8(4) and 8(5) of the 2006 Act. We are of the view that the Regulations meet that requirement and we therefore have a duty to exempt repeaters compliant with these requirements from the need for a licence.
- 1.27 As explained in the November Policy Statement, we also consider that – even if there are some instances where the wider exemption regime may place additional pressure on network capacity in congested areas in certain circumstances – it nevertheless remains appropriate for us to exercise our general underlying discretion in section 8 of the 2006 Act to make licence exemption regulations taking account of our wider statutory duties.

Options considered

- 1.28 The options open to us having made our November 2021 decision on authorising certain mobile phone repeaters for static indoor use and for low gain in-vehicle use were:
- i) to make the Regulations in line with that policy decision; or
 - ii) to do nothing and not implement that decision.

Analysis of options

Make new Regulations

- 1.29 When considering the authorisation of the deployment of equipment Ofcom can either licence them or make regulations to exempt them from licensing. Section 8(4) of the 2006 Act requires that if Ofcom is satisfied that the criteria set out in section 8(5) of the 2006 Act are met, we must make regulations to licence-exempt the deployment of equipment. If the requirements of section 8(5) are not met, this does not prevent us making an exemption, but any decision would need to consider the impacts and benefits of doing so.
- 1.30 We have devised a set of technical conditions in which the installation and use of specified repeater devices is not likely to have the effects described in section 8(5) of the 2006 Act. We take account that we are, accordingly, required under section 8(4) to make a licence exemption. One impact of making the Regulations is to comply with that legal obligation.

- 1.31 We have nevertheless considered whether it is appropriate to make the Regulations, taking account of our wider statutory duties (i.e., even if we were not required to do so).
- 1.32 In our assessment, the likely practical impact of the Regulations should be to increase the options available to consumers to improve their mobile coverage, without adverse effects on mobile networks and other consumers. We recognise that single-operator repeaters are already licence exempt and that this addresses, to some degree, the needs of consumers. However, a key motivation behind the proposals set out in our 2021 consultation was to encourage the development of a wider market in legal repeaters, and at a lower cost to consumers. This recognised that the 2018 Regulations represented a cautious approach to allowing the installation and use of static indoor mobile repeaters without a licence and include some restrictions which we are satisfied are no longer necessary. In particular:
- a) the 2018 Regulations allow consumers to place two or more ‘single operator’ repeaters next to each other to boost the signals of more than one operator. However, whilst the same improvement could be achieved more simply and cheaply in one device (which we refer to as a ‘provider-specific’ repeater) with no greater impact on other services – that is, under the 2018 Regulations, illegal without a licence. We are satisfied that it is safe to allow the use of provider-specific repeaters on a licence exempt basis provided that certain technical requirements set in the Regulations are met;
 - b) subsequent technical analysis has since shown that it is also safe to allow a different type of repeater, referred to as a ‘multi-operator repeater’³, provided that certain conditions set in the Regulations are met; and
 - c) the 2018 Regulations restrict the scope of the licence exemption for static indoor mobile repeaters to repeater devices which are amplifying a 2G, 3G or 4G mobile signal. However, we are mindful that mobile operators have started to roll out their 5G mobile networks, and are concerned that this restriction will prevent the licence exemption regime from being sufficiently future-proof and will impose a disproportionate restriction on the use of licence-exempt repeaters. This would adversely impact those consumers that, for example, suffer from poor 5G mobile coverage at home.
- 1.33 The further likely impact of the Regulations, in our view, is that manufacturers will respond to consumer demand by developing appropriate repeater products and, where applicable, extending the range of repeater products that they offer. In those circumstances, there should be no overall cost to manufacturers. Instead, they would benefit from the widening of the legitimate retail market for them to service.

³ Provider-specific repeaters will be able to repeat the signal of one or more MNOs at any one time, individually setting the level of amplification for each MNO’s signals. Multi-operator repeaters will be able to amplify the signal of more than one MNO at the same time but, unlike provider-specific repeaters, any such amplification would be by the same level and would not be calculated individually for each MNO.

- 1.34 There would be further knock-on effects on mobile network providers. An increase in the lawful use of compliant repeaters, at the expense of the unlawful use of non-compliant ones, would help to reduce the risk of interference over the long term caused by consumers trying to improve their coverage by unlawful means.
- 1.35 In particular, by having a legal alternative that minimises the risk of interference and which allows for the amplification of more than one mobile operators' signals simultaneously, the consumer demand for repeaters should be satisfied by the supply of legally compliant equipment. We would accordingly expect that, over time, the demand for illegal repeaters would be diminished. This would in turn reduce the impact on network providers caused by interfering illegal equipment (the effect of which may be to deny their customers service). All of this would help secure optimal use of the spectrum.
- 1.36 Additionally if, as we anticipate, making the Regulations led to increased consumer demand for, and lawful use of, repeaters which are unlikely to cause interference, at the expense of unlawfully used equipment likely to have that effect, we would also expect this to reduce network operators' and Ofcom' costs in investigating and dealing with problems to networks caused by illegally used devices. We will continue to investigate such cases but, where consumers would have a lawful alternative that minimises the impact on mobile networks, we expect these costs to be reduced.
- 1.37 Accordingly, in our judgment, the Regulations would have the following impacts:
- a) an increase in the ability of consumers to take steps to improve the mobile coverage they receive, by increasing their options to self-install and use licence exempt-repeaters for indoor use;
 - b) where they exercise that ability, an improvement in coverage for those consumers, without this being likely to give rise to deleterious effects on mobile networks and other users;
 - c) a reduction in the need for consumers to resort to the purchase of repeaters whose use is unauthorised and unlawful, which should reduce the impact of unlawful repeaters on the MNO's networks; and
 - d) where demand for such repeaters is reduced, a decline in the offering of them for sale in the UK.
- 1.38 We also take account that licence exemption presents the lowest barrier to entry compared with other forms of authorisation, such as individual licences. Costs to business (and consumers, including the voluntary sector) are likely to be lower under a licence-exemption regime than where there is a requirement for users to obtain individual licences. Businesses, for example, would not have to incur the time, opportunity and administrative costs associated with applying for a licence and the cost of the licence itself (consumers could also save some of these costs).
- 1.39 There are one-off administrative costs for Ofcom associated with making Statutory Instruments. These are low, however, both in absolute terms and compared to licensing alternatives that might require, for example, the maintenance of an ongoing administrative

scheme. Moreover, the costs such as they are will also be offset by the benefits to businesses and consumers outlined above.

- 1.40 Some mobile operators have suggested there may be a cost to them if a wider adoption of repeater devices leads to increased demand for mobile services from their customers and impacts the quality of their mobile services (thereby requiring further investment from them to improve their quality of service). As explained in the November Policy Statement, we do not consider it likely that the quality of service provided by mobile operators will be adversely affected as a result of exempting the types of repeaters covered by the Regulations. Further, any additional demand on networks – even if it does cause congestion in some limited circumstances – should not impact quality of service in a way that operators do not already have to address in the normal course of their business. There are many reasons why networks can become congested⁴ and which networks manage successfully. The extended licence exemption regime should help consumers to get a better service and encourage investment by MNOs to address any issues of congestion, and we think it would still be appropriate to exercise our general discretion to make licence exemption regulations under section 8(3) of the WTA 2006, taking account of our statutory duties and powers (including to secure the optimal use of spectrum and encourage innovation and investment), even if there were some instances where technical quality of service might be adversely impacted.
- 1.41 Overall, therefore, we judge that making the Regulations is likely to generate a net benefit for UK citizens, consumers and businesses, or at worst would have a neutral outcome (to the extent that benefits may depend on the uptake of the new opportunities afforded by the Regulations). It is unlikely to impose costs on other users. On that basis, the effect of making the Regulations would likely be positive.

Do nothing

- 1.42 The main alternative to allowing a wider range of indoor repeaters to be installed and used without a licence would have been to retain the 2018 Regulations, which allowed the use of only single-operator repeaters. Another alternative would have been to allow the use of just one additional type of repeater i.e. either provider specific or multi-operator devices.
- 1.43 Both of these alternatives were considered. One impact of these would have been, in our view, a failure to comply with the requirements of section 8(4) of the Act.
- 1.44 Further, we concluded it would be an unnecessary limitation on the options available to people to improve their mobile coverage if we were to retain the 2018 Regulations or to restrict the extension to either provider specific or multi-operator devices (or, indeed, to not allow for the exemption of 5G static indoor mobile repeater devices).

⁴ As explained in the Policy Statement, congestion is caused by excessive demand on network provision e.g. by large numbers of people wanting access at the same time (such as in crowds or if there is a major news event or disruption to travel); or by consumers wanting to use greater bandwidth (for example, if a popular new app is released); or the opening of a big new office; or by changes in consumer contracts (such as a major employer switching networks for its company-issued mobile phones); or many more.

- 1.45 In addition, citizens and consumers would not be able to benefit from the existence of a legitimate retail market for wide-band repeaters (i.e., repeaters which boost the signals of more than one mobile operator at the same time), which could offer a more cost-effective solution for many consumers looking to improve their indoor mobile coverage. This would likely lead to continued demand for the use of unauthorised repeater devices by them. They might themselves obtain better mobile coverage under these circumstances, but there would be continued negative effects on networks and other consumers overall, and they would be exposed to the risk of committing a criminal offence.
- 1.46 Citizens and consumers would also not be able to benefit from the existence of a legitimate retail market for 5G repeaters. We recognise that 5G mobile services are likely to become increasingly important in future as MNOs start to roll out their 5G networks, and that a failure to allow for 5G mobile repeaters could adversely impact those in rural areas or those with otherwise poor mobile coverage. At present, the main frequency band used by the MNOs to deliver 5G services (the 3.4-3.8 GHz band) is not covered by the Regulations, so - for the time being - the benefits to 5G will be limited. Nonetheless, we believe it is worth making the rules applicable to static indoor repeaters technology neutral and note that MNOs may use the 700 MHz band (and other bands covered by the Regulations) to deliver 5G services.
- 1.47 Another relevant factor is that, in some cases, consumers unlawfully using repeaters have denied mobile coverage to large numbers of other consumers nearby, resulting in Ofcom having to investigate the source of the interference. If we did not make the Regulations, these effects and costs would likely continue at a similar level.
- 1.48 By not making the Regulations there would be no additional cost to Ofcom relating to making a Statutory Instrument. However, again, these costs are slight compared to those that would be incurred with ongoing investigations and enforcement action and those incurred in the development of the policy decision that the Regulations would implement. Not making the Regulations would also mean that we would not be implementing the policy decision we made in the November Policy Statement. That would have an impact on the regulatory certainty stakeholders derive where Ofcom does what it says it will.

The preferred option and decision

- 1.49 Our preferred option was to make the Regulations and we have done so. This is consistent with the policy decisions we took in November 2021.

Conclusion

- 1.50 We have assessed the impact of a wide range of implications of introducing the Wireless Telegraphy (Mobile Repeater) (Exemption) Regulations 2022. We have done so in terms of their potential benefit to citizens, consumers and businesses, as against the likely costs.
- 1.51 We have also assessed the implications of alternative approaches i.e. of not extending the existing limitations on the installation and use of indoor mobile repeaters. We consulted on our proposals and reached our conclusions after considering all responses.

1.52 We consider that the final decisions set out in our November Policy Statement and May Final Statement - and put into effect through the Regulations - will deliver our policy objectives and fulfil our statutory duties. Further, we consider that the benefits of introducing the regulations as summarised in this regulatory impact assessment outweigh any costs involved.

Equality Impact Assessment

1.53 Following an initial assessment of our policy proposals, we consider that it is reasonable to assume that any impacts on consumers and citizens arising from the Regulations would not differ significantly between groups or classes of UK consumers and citizens, all of whom would have access to licence exempt use of repeater devices, potentially at end-user prices reflective of all general input costs.

1.54 We do not consider that there is evidence to suggest that the decision to make the Regulations would have a significantly greater direct financial impact on groups including or based on gender, race or disability or for consumers in Northern Ireland relative to consumers in general.

1.55 We have not carried out a full Equality Impact Assessment in relation to race equality or equality schemes under the Northern Ireland and disability equality schemes. This is because we do not think our decision here would have (and it is not intended to have) a significant differential impact on different gender or racial groups, on consumers in Northern Ireland or on disabled consumers compared to consumers in general.

Declaration

I have read the Regulatory Impact Assessment and I am satisfied that the benefits justify the costs.

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