
Regulation Impact Assessment

Ofcom regulation of short range devices and railway level crossing radar sensor systems

1. Impact Assessment

Introduction

- 1.1 Ofcom acts in accordance with Government practice that, where a statutory regulation is made, a Regulatory Impact Assessment (RIA) must be undertaken. We also comply with our duty under section 7 of the Communications Act 2003 (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.
- 1.2 Impact assessments provide a valuable way of assessing different options for regulation and showing why the preferred option was chosen. They form part of best practice policymaking. 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.
- 1.3 For further information about our approach to impact assessments, see the guidelines, Better policymaking: Ofcom's approach to impact assessment, which are on our website: http://www.ofcom.org.uk/consult/policy_making/guidelines.pdf.
- 1.4 The analysis set out in this document represents a regulatory impact assessment of the Wireless Telegraphy (Exemption and Amendment) (Amendment) Regulations 2020 (the Regulations). The assessment is consistent with the Government practice on RIAs and Ofcom's duty under the 2003 Act.

Background

- 1.5 In the UK, Ofcom is responsible for authorising civil use of the radio spectrum and achieve this by granting wireless telegraphy licences under the Wireless Telegraphy Act 2006 (the WT Act) and by making regulations exempting users of particular equipment from the requirement to hold such a licence.
- 1.6 Under section 8(1) of the WT Act, it is unlawful to install or use wireless telegraphy apparatus without holding a licence granted by us, unless the use of such equipment is exempted. However, under Section 8(4) of the WT Act we must make regulations to exempt the use of equipment if we are satisfied that it is unlikely to cause undue interference.
- 1.7 Short Range Device (SRD) is the term covering radio equipment that has a low capability of causing interference to other radio equipment. SRDs use either integral, dedicated or external antennas and all modes of modulation can be permitted subject to the relevant standards.
- 1.8 The Regulations harmonise spectrum for SRDs within the 874 to 874.4 MHz and 915 to 919.4 MHz frequency bands to permit a range of different and innovative applications including mass-market and/or portable products which can easily be taken and used across

borders. In these frequency bands, the update is required to enable technically advanced radio-frequency identification devices (RFIDs) as well as 'Internet of Things' applications for networked devices in data networks. The Regulations mean that SRDs such as those used for networked metering, metering grid and home automation can be deployed and operated without the need of a licence.

- 1.9 Railway Level Crossing Radar Sensor Systems are safety devices used to protect railway crossings by detecting obstacles at UK level rail crossings. Network Rail is the only current UK user of Railway Level Crossing Radar Sensor Systems and we have introduced a licence for Railway Level Crossing Radar Sensor Systems so they can be deployed in areas closer to Radio Astronomy sites in Jodrell Bank, Cambridge, Defford, Darnhall, Knockin and Pickmere.
- 1.10 Railway Level Crossing Radar Sensor Systems have been licence-exempt since 2010, however this exemption has meant a 20 km exclusion zone around the six Radio Astronomy sites noted above. The new licensing approach will allow these systems to be deployed in these areas while permitting Ofcom to impose technical, behavioural or installation conditions at system locations.

Proposal

- 1.11 This RIA relates to the decision to make the Regulations. The Regulations amend the Wireless Telegraphy (Exemption and Amendment) Regulations 2010 (the 2010 Exemption Regulations). They make changes to:
- a) add to the current licence exemptions for SRDs to enable common technical conditions and sharing in the 874 to 874.4 MHz and 915 to 919.4 MHz bands. The Regulations authorise new short-range devices, new types of machine-to-machine communications and technically advanced RFIDs;
 - b) facilitate the new licence for Railway Level Crossing Radar Systems. The licensing of these systems enables specific behavioural conditions to be imposed including to enable a manageable coordination process that can include commercially sensitive information. It also allows us to change the maximum power limit of this equipment which has increased from 500 mw to 5W because of a change in the related European Telecommunications Standards Institute (ETSI) Standard¹ and removal of the 20 km exclusion zone around Radio Astronomy Sites.

The citizen and/or consumer interest

- 1.12 Our principal duty under section 3 of the 2003 Act is to further the interests of citizens in relation to communications matters; and of consumers in relevant markets, where appropriate by promoting competition.

¹ [EN 300 440](#) was updated in July 2018.

- 1.13 We take account of the impact of our decisions upon both citizen and consumer interests in the markets we regulate. We must, in particular, secure the optimal use for wireless telegraphy of spectrum and have regard to the principle under which all regulatory activities should be targeted only at cases in which action is needed.
- 1.14 In making these changes, we considered the wider impact beyond immediate stakeholders in the radiocommunications community. We believe that our decisions are of benefit to citizens and consumers for the following reasons:
- a) The SRD measures concern the use of radio equipment on a licence-exempt basis, which reduces the regulatory and administrative burden on our stakeholders and helps to secure the optimal use of spectrum;
 - b) The SRD licence-exemptions support the introduction of new and innovative technologies that will be of benefit to consumers and citizens in general and are for the use of equipment that is unlikely to cause harmful interference to other spectrum users. In this instance, we are implementing European Commission Implementing Decision 2018/1538/EU of 11 October 2018 (the SRD Decision), a decision supported by studies undertaken by the European Conference of Postal and Telecommunications Administrations (CEPT) which address interference and quality of service issues and where mitigation techniques have been suggested, these are to be implemented in the UK;
 - c) Harmonisation of technical conditions across a number of countries allows for equipment manufacturers to benefit from economies of scales and thereby reducing the cost of the equipment to UK citizens and consumers; and
 - d) The Railway Level Crossing Radar System changes help improve safety for citizens when using railway level crossings and the imposition of the licensing arrangements for Railway Level Crossing Radar Sensor will facilitate the most efficient roll-out of equipment which is designed to protect rail passengers and users of level crossings.

Our policy objective

- 1.15 Spectrum is a vital component to enable wireless communication and one of Ofcom's main duties is to ensure that radio spectrum is used in the most effective way. Our high-level goal is to ensure that spectrum is not a barrier to making communications work for everyone.
- 1.16 We seek, wherever possible, to reduce the regulatory burden upon our stakeholders, in this instance users of the radio spectrum. We can achieve this by removing the need for spectrum users to apply for an individual wireless telegraphy licence to authorise the use of SRDs and by making our licensing of Railway Level Crossing Radar Sensor Systems with a low regulatory burden to enable the further roll-out of safety equipment.

Options considered

- 1.17 The options open to us in relation to implementing the SRD Decision have been:

- to make the Regulations that implement SRD Decision; or
- to do nothing.

1.18 The options open to us in relation to Railway Level Crossing Radar Sensor Systems have been:

- to introduce a licence arrangement for Railway Level Crossing Radar Sensor Systems; or
- to do nothing.

Analysis of options - the SRD Decision

Make new regulations

- 1.19 When considering the authorisation of devices Ofcom can either licence them or make regulations to exempt them from licensing. Section 8(4) of the WT Act requires that if Ofcom is satisfied that the criteria set out in section 8(5) of the WT Act are met, Ofcom must make regulations to licence-exempt the equipment. If the equipment does not meet all of the requirements of section 8(5) this does not prevent us still going ahead with exemption, but any decision would need to consider the impacts versus the benefits of any such decision.
- 1.20 Most SRDs operating in the UK are already authorised on a licence-exempt basis as they meet the requirements set out in section 8(5) of the WT Act. In general terms, licence exemption presents the lowest barrier to entry compared with other forms of authorisation, such as individual licences.
- 1.21 In 2013, we considered the best authorisation approach for equipment in the 870 to 876 MHz and 915 to 921 MHz bands.² We looked at whether there were any mitigating factors that would cause us to diverge from this approach and instead licence the equipment. We found no reason to impose licensing arrangements and therefore proceeded to exempt the equipment from the need to hold a licence.
- 1.22 From this starting point, we have considered any newer concerns over harmful interference or congestion to existing users or potential new users of these band bands. Harmful interference or congestion could negate the benefits of any reductions in the regulatory burden gained from exemption.
- 1.23 The Regulations support the harmonised market across Europe for SRDs within the 874 to 876 MHz and 915 to 921 MHz bands. This brings with it many benefits from the free circulation and use of devices. Manufacturers should benefit from economies of scale which drive down prices for consumers. Citizens should benefit from continued access to devices when travelling to other European countries. The Regulations are also consistent with the EU harmonisation decision on these frequencies. These are binding on all Member

² See [Consultation on 870-876 MHz and 915-921 MHz Update and Way Forward](#)

States and we are therefore legally required to implement them during the transition period.

- 1.24 The Regulations are supported by the recommendations in CEPT's Addendum to Report 59 and the work of ETSI on harmonised standards for SRDs.³ Ofcom has been integral to the work of CEPT and ETSI. The technical conditions for SRDs developed by these organisations help to ensure the efficient use of spectrum and the avoidance of interference.
- 1.25 Ofcom believes the SRD Decision will deliver many positive benefits from enhancing the freedom of movement of SRDs, by continuing the common approach to spectrum access conditions for SRDs and potentially lowers the costs of SRDs for UK consumers and business.
- 1.26 Overall, we believe that costs to business are likely to be lower under a licence-exempt approach than the requirement for users to obtain individual licences. Licence exemption represents the least cost regulatory approach to authorisations on the use of spectrum for SRDs.
- 1.27 Our view is that making the Regulations is likely to generate a net benefit for UK businesses, citizens and consumers and at worst, would have a neutral outcome (to the extent that benefits may depend on the uptake of the new opportunities afforded by the proposal). We consider it is unlikely to impose costs on other users. Therefore, the effect of implementing the Regulations would be likely to be positive overall.
- 1.28 There are one-off administrative costs associated with making Statutory Instruments. We consider the implementation costs to be low, both in absolute terms and in comparison, to licensing alternatives that might require an auction or the maintenance of a licence scheme. Moreover, the costs such as they are will also be offset by the benefits to businesses and consumers outlined above.

Do nothing

- 1.29 The alternative to making the Regulations would be to do nothing. By doing nothing, we mean not making the Regulations and not taking advantage of the technological and market developments for SRDs.
- 1.30 If the spectrum access conditions were not harmonised for SRDs, limitations on free movement, increased production costs and the risks of harmful interference with other radio applications and services due to unauthorised use are more likely to occur for UK citizens and consumers.
- 1.31 Citizens and consumers would not be able to benefit from the new opportunities that these devices could provide as a result of advances in technology. If the UK did not participate in this approach, it might be argued that UK businesses and consumers would be disadvantaged in not having access to these innovative technologies.

³ [Addendum to the CEPT Report 59](#)

- 1.32 By not making regulations, there would be no additional cost imposed on Ofcom relating to making a Statutory Instruments. Taking this course would also mean that we would not be implementing policy changes that Ofcom had previously consulted and decided upon, impacting on the regulatory certainty for stakeholders.
- 1.33 Finally, if we did not implement an EU decision there are legal risks associated with non-compliance. The UK remains bound by EU law as if it were a Member State during the transitional period.

The preferred option

- 1.34 Our preferred option has been to make the Regulations. This decision is consistent with European law and the policy considerations of Ofcom.

Analysis of options –Railway Level Crossing Radar Sensor Systems

Introduce a licence for Railway Level Crossing Radar Sensor Systems

- 1.35 The introduction of licensing arrangements means that Network Rail (the only current UK user of Railway Level Crossing Radar Sensor Systems), will need to apply to Ofcom for a licence and to pay fees in order to establishment, installation and use of this equipment in the UK.
- 1.36 The licensing arrangements will result in a direct cost for Network Rail in the order of £50 for a five year, UK-wide licence. While this is a shift from the current licence exemption, it is low cost and presents a low administrative burden. This is because the license will cover all systems on a national basis, for a low fee, with a potential one-off application process. Accordingly, there should be low compliance cost on Network Rail for the use of safety and infrastructure critical equipment in the 24.100 GHz to 24.350 GHz band.
- 1.37 Our view is that introducing the licensing arrangements are likely to generate a net benefit for UK businesses, citizens and consumers and at worst, would have a neutral outcome (to the extent that benefits may depend on the continued deployment of these systems). We have noted the low licensing costs for Network rail and consider that our approach is unlikely to impose costs on other users. Therefore, the effect of implementing the licence arrangements would be likely to be positive overall.
- 1.38 There are one-off and ongoing administrative costs for Ofcom associated with imposing licensing arrangements for Railway Level Crossing Radar Sensor Systems. However, we considered that the implementation costs to be low and the administrative burden is minimised through the design of the licence. Overall, the costs such as they are would be offset by the benefits to Ofcom, Network Rail, RAS and their consumers.

Do Nothing

- 1.39 The alternative to introducing the licensing arrangements for Railway Level Crossing Radar Sensor Systems would be to do nothing. This would maintain the 2010 Licence Exemption

and would mean that a number of Railway Level Crossing Radar Sensors would not be able to be installed in certain areas for the safety and protection of UK level rail crossings. It would mean that Railway Level Crossing Radar Sensor Systems could only operate according to the technical specifications in Interface Requirement 2080.⁴

- 1.40 Citizens and consumers would not benefit from changes likely to improve safety for users of railway level crossings or from the expected efficient roll-out of equipment designed to protect rail passengers and users of level crossings.
- 1.41 No additional cost would be imposed on Ofcom if we did not introduce the new licence. Taking this course would also mean that we would not be implementing policy changes that Ofcom had previously consulted and decided upon, impacting on the regulatory certainty for stakeholders.

Equality Impact Assessment

- 1.42 We consider that it is reasonable to assume that any impacts on consumers and citizens arising from the Regulations and new licence arrangements would not differ significantly between groups or classes of UK consumers and citizens, all of whom would have access to these services, potentially at end-user prices reflective of all general input costs, including opportunity costs of spectrum used.
- 1.43 We do not consider that the proposal to make the Regulations or to introduce the licence for Railway Level Crossing Radar Sensor Systems would have a significantly greater direct financial impact on groups including based on gender, race or disability or for consumers in Northern Ireland relative to consumers in general.
- 1.44 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 at this stage. This is because we are not aware that decisions made and implemented here are intended (or would, in practice) 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.

⁴ [IR 2080](#)

Declaration

I have read this regulatory impact assessment and I am satisfied that the benefits justify the costs.

Philip Marnick

Group Director of Spectrum Group

For and by the authority of the Office of Communications

Date: 28 May 2020

Contact point:

Elizabeth Press

Spectrum Management and Authorisation
The Office of Communications
Riverside House
2a Southwark Bridge Road
SE1 9HA
London