



Decision to make the Wireless
Telegraphy (Control of
Interference from Apparatus)
Regulations 2016

Statement

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About this document

This statement sets out Ofcom's decision for new wireless telegraphy legislation, intended to tackle undue interference from electrical and electronic apparatus.

Electrical and electronic apparatus are capable of emitting electromagnetic energy. In most cases, this is minimal and has no noticeable negative effects. However, in some cases the level of energy emitted from apparatus can cause undue interference to wireless communications (i.e. wireless telegraphy).

Ofcom has powers to take enforcement action in instances where some types of electrical or electronic apparatus causes undue interference to wireless communications (i.e. wireless telegraphy).

The regulations (the "Regulations") are intended to keep pace with technical developments.

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Section 1

Executive Summary

- 1.1 Ofcom has a number of functions concerning the management of the radio spectrum and plays a role in the management of harmful interference. One common source of radio interference is malfunctioning or badly installed or maintained electrical and electronic apparatus. This can include lighting systems, IT equipment or central heating systems.
- 1.2 Legislation provides a means by which, subject to conditions set out in the legislation, Ofcom may require the user of a device causing interference to turn it off.
- 1.3 Ofcom rarely needs to proceed with enforcement action because users of devices causing interference are usually willing to cooperate. To date Ofcom has never needed to proceed to a prosecution. However, the existing regulations are becoming less relevant with new technology. With this in mind, we are increasingly relying on voluntary cooperation with no means to proceed if the user does not wish to cooperate.
- 1.4 We therefore intend to make the Regulations under Section 54 of the Wireless Telegraphy Act 2006 to bring all devices using old or new technology under a single rule. This statement presents our decision to make the Regulations.
- 1.5 The Regulations described in this statement brings the situation up to date and applies to any equipment or device, regardless of the underlying technology. For instance, existing regulations provide for Ofcom to deal with interference from fluorescent lighting, but do not cover LED lighting. The making of these Regulations will allow Ofcom to create a more simplified regime. Ofcom does not expect that more enforcement notices or prosecutions will result from the making of these Regulations.
- 1.6 Before deciding to make the Regulations, in accordance with the requirements of section 122(4) of the Act, we published the Notice setting out our proposal to make them, on 5 January 2015. This contained a draft of the Regulations and invited comments from stakeholders on whether the Regulations correctly gave effect to the policy proposals referred to in the Notice.
- 1.7 We received 161 responses (23 confidential and 138 non-confidential) to the Notice. In accordance with section 122(4) (c) of the Act, we have considered these responses. After doing so, and for the reasons set out below, we have decided to adopt the Regulations as proposed (subject to some minor amendments, the details of which can be found in section 5 below).

Section 2

Background

- 2.1 Ofcom has a number of functions in relation to the management of the radio spectrum and plays a role in managing harmful interference.
- 2.2 Interference may be caused by licensed radio apparatus or by improper or unlicensed radio apparatus. Ofcom has powers to deal with those situations and these are not the subject of this statement.
- 2.3 The Regulations described in this statement are intended to give Ofcom the means to deal with the very common situation where interference to a radio spectrum user is being caused by apparatus which is not intended to transmit radio signals and where the interference is due for example to the equipment being faulty or improperly installed. Common examples include fluorescent or LED lighting systems, power supplies for consumer electronics, central heating thermostats and some types of IT equipment.
- 2.4 When Ofcom finds apparatus causing problems, it advises the user to arrange a repair or replacement. In some cases where the interference is very serious, for example to airport radio systems or to the emergency services, Ofcom should have the power to require the user to turn the equipment off immediately.
- 2.5 In most instances Ofcom finds that users are more than willing to cooperate, but this is not always the case. For that reason existing legislation provides a power, subject to certain conditions being met, for Ofcom to make Regulations which allow it, by means of an enforcement notice, to require a user to cease using apparatus that is causing interference. The person who does not comply with the enforcement notice commits an offence, and will potentially become liable to prosecution.
- 2.6 Ofcom has rarely needed to serve an enforcement notice and has never needed to proceed to a prosecution, but increasingly the arrival of new technology means that interfering devices are outside the scope of the existing regulations and Ofcom can only rely on voluntary cooperation of the user of the interfering apparatus to cease the interference.
- 2.7 The Regulations described in this statement brings the situation up to date and applies to any equipment or device, regardless of the underlying technology.

Section 3

The legislative setting

Enforcement

- 3.1 Ofcom has enforcement powers in relation to undue interference. These are set out in primary legislation. In particular, section 55 of the Act provides for the giving of notices by Ofcom prohibiting the use of apparatus (“enforcement notice”). However in order to avail of this existing power to serve these notices, regulations must first be made under section 54 setting requirements to be complied with.
- 3.2 Enforcement notices may be given in the limited circumstances set out in the Act. These circumstances are where, in the opinion of Ofcom:
 - 3.2.1 apparatus does not comply with the requirements applicable to it under regulations made under section 54(1); and
 - 3.2.2 either the first or the second condition below is satisfied.
- 3.3 The first condition is that the use of the apparatus is likely to cause undue interference with wireless telegraphy used –
 - 3.3.1 for the purposes of a safety of life service; or
 - 3.3.2 for a purpose on which the safety of a person, or of a ship, aircraft or vehicle may depend.
- 3.4 The second condition is that-
 - 3.4.1 the use of the apparatus is likely to cause undue interference with wireless telegraphy other than wireless telegraphy falling within the first condition;
 - 3.4.2 the use of the apparatus in fact has caused, or is causing, such interference; and
 - 3.4.3 the case is one where Ofcom consider that all reasonable steps to minimise interference have been taken in relation to the wireless telegraphy station or wireless telegraphy apparatus receiving the interference.
- 3.5 This power goes to discharging a number of Ofcom’s functions relating to the management of the electromagnetic spectrum for wireless telegraphy.
- 3.6 Ofcom cannot guarantee an interference free radio spectrum to any stakeholder group (licensed or otherwise) and before determining whether to give an enforcement notice, Ofcom will carefully consider the circumstances including whether the affected apparatus is sufficiently immune from undue interference.
- 3.7 Use of the apparatus causing the undue interference (the “offending apparatus”) is only prohibited after a date fixed on the notice. In the first condition type cases i.e. cases relating to safety wireless telegraphy, the notice can take immediate effect. Whereas in the second condition type cases i.e. cases relating to non-safety wireless telegraphy, the date fixed on the notice must not be less than 28 days on which the notice is given. This means that if the undue interference is affecting wireless

telegraphy not relating to safety the recipient will have at least a 28 day period within which to take steps to stop the interference.

- 3.8 The Act provides for an appeal from an enforcement notice and where an appeal is pending, proceedings are stayed until the appeal is finally determined.
- 3.9 A failure to comply with an enforcement notice is an offence. The offence only occurs if the terms of the enforcement notice are breached.

Regulations under section 54(1)

- 3.10 Electrical and electronic apparatus and the capability to cause interference is regulated under the electronic compatibility (“EMC”) regulatory regime until the point apparatus is placed on the market or put into service in the European Union. After that time (once it has reached the end-user), it is no longer subject to the undue interference requirement of this regulatory regime. The Regulations proposed in our Notice are intended to tackle interference once the apparatus has reached and is being used by the end-user, in other words, the period of time not covered by the EMC regulatory regime.
- 3.11 As mentioned above, in order for Ofcom to be able to avail of the existing power to serve enforcement notices, regulations must first be made under section 54(1) of the Act. Accordingly, Ofcom proposed the making of regulations of this kind in the Notice published on 5 January 2015.
- 3.12 The power which allows for the Regulations to be made is referred to as the enabling power and any legislation made under it must remain within the strict confines it sets out. In this case, the Regulations are to be made under the enabling power in section 54(1) of the Act, this enables Ofcom to make regulations prescribing the requirements to be complied with in the case of apparatus specified in the regulations, if the apparatus is to be used.
- 3.13 The Regulations Ofcom proposed in the Notice prescribe a requirement imposed on the use of apparatus after it has already been placed on the market¹ and/or put into service² and has reached the end-user. The Regulations are intended to address situations outside Directive 2004/108/EC (OJ No L390, 31.12.2004, p.27) (the “EMC Directive”) and Directive 1995/5/EC (the “RTTE Directive”) ³. Ofcom considers that the Regulations do not infringe on the total harmonisation approach of the EMC and RTTE Directives and implementing regimes.
- 3.14 Directive 2014/30/EU (the “new EMC Directive”) is required to be adopted by 19 April 2016. As set out further below, the obligation to transpose the new EMC Directive into national law is confined to the provisions which represent a substantive amendment as compared to the current EMC Directive. We do not expect that this will result in any significant amendments to the Regulations, and, on that basis, decided that the Regulations should be made as soon as possible and could be amended as and when required.

¹ “A product is placed on the market when it is made available for the first time on the Union market.” The “Blue Guide” on the Implementation of EU product rules 2014, p.20.

² “Putting into service takes place at the moment of first use within the [European] Union by the end user.” The “Blue Guide” on the Implementation of EU product rules, 2014, p.21.

³ As amended from time to time.

3.15 In particular, the Regulations require that apparatus in use by the end-user must operate in such a way that the maximum intensity of electromagnetic disturbance generated shall not exceed the level permissible under the requirements of the EMC Directive after the apparatus has been placed on the EEA market or put into service in the EEA and cannot be withdrawn from the EEA market in accordance with the EMC Directive or the Electromagnetic Compatibility Regulations 2006⁴ (“EMC Regulations”)⁵. Where the use of apparatus does not meet that requirement, Ofcom may, where conditions prescribed in section 55 of the Act are met, serve an enforcement notice.

3.16 The Regulations do not apply to equipment covered by the RTTE Directive⁶.

Statutory Notice

3.17 Under section 122(4) to (6) of the Act, we are required to publish a notice of any proposal to make regulations. The Notice must state that Ofcom proposes to make the regulations in question, must set out their general effect, say where a copy may be obtained and give any person or party an opportunity to make representations about them.

3.18 We published the Notice, meeting the statutory requirements, on 5 January 2015. The Notice included a copy of the proposed Regulations. The Notice gave any person or party who wished to do so until 16 February 2015 to make representations. The Notice can be viewed at <http://stakeholders.ofcom.org.uk/consultations/undueinterference/>

3.19 The Notice explained that the Regulations will regulate the intensity of the electromagnetic energy at which electrical and electronic apparatus operates such that it does not cause undue interference to wireless telegraphy apparatus.

3.20 We received 161 responses (23 confidential and 138 non-confidential) responses to the Notice and these are detailed in the next section of this document.

⁴ SI 2006/3418.

⁵ The Regulations refer to “the EEA” as the European Union and the other States in the European Economic Area.

⁶ OJ No. L 91, 7.4.1999, p.10 as amended by Regulation (EC) No 1882/2003 of the European Parliament and of the Council of 29.9.2003 (OJ L284, 31.10.03, p.1).

Section 4

Outline of responses

Introduction

- 4.1 This section outlines the comments we received to the Notice and our response to these.
- 4.2 We asked stakeholders whether they agreed that the Regulations would correctly give effect to the policy proposals and other intentions set out in our consultation document. Of the 161 responses received, 78 were fully supportive of our proposals. They expressly welcomed the Regulations without providing any further comments. There were 67 responses that broadly welcomed our proposal to introduce new Regulations and provided additional comments. Thirteen responses submitted that Ofcom should not implement the proposed Regulations and supplied additional comments. Three responses maintained that Ofcom should not implement the proposed Regulations with no additional comments. All of the non-confidential responses are published on our website.⁷
- 4.3 Following consideration of the responses, for the reasons as outlined below, we have decided to make the Regulations. We did not consider that any of the responses provide a basis for significantly amending the Regulations, and we have decided to adopt them (subject to some minor amendments, the details of which are explained below).

Responses to the Notice

- 4.4 Some of the comments we received relate directly to the Regulations while others dealt with the practical implementation of the Regulations and Ofcom's general policy on enforcement. The majority of responses supported the proposed Regulations. The additional comments received in the 67 responses that broadly welcomed the proposed Regulations are grouped into the following categories:
 - 4.4.1 Exclusion of fixed installations;
 - 4.4.2 Definition of "apparatus" in the Regulations;
 - 4.4.3 Configuration of devices;
 - 4.4.4 Exclusion of Radio and Telecommunications Terminal Equipment (RTTE) apparatus;
 - 4.4.5 Apparatus which can be withdrawn from the EU market;
 - 4.4.6 Additional protection from interference for hobby radio;
 - 4.4.7 New EMC Directive and new Radio Equipment Directive.

⁷ <http://stakeholders.ofcom.org.uk/consultations/undueinterference/?showResponses=true>

- 4.5 The 13 responses with additional comments that did not agree that the Regulations would correctly give effect to the policy proposals and other intentions set out in our consultation are grouped into the following categories:
- 4.5.1 definition of “apparatus” in the Regulations;
 - 4.5.2 enforcement resources (Ofcom’s general policy).
- 4.6 In addition some respondents made comments regarding the implementation of the Regulations and comments on other areas of Ofcom’s general policy on enforcement.

Fixed installations

- 4.7 A number of comments received related to fixed installations, in particular why they were excluded from the scope of the proposed Regulation. Several respondents submitted that the Regulations should apply to fixed installations.
- 4.8 In their response, the Joint Radio Company (JRC) suggested that Ofcom clarify what is meant by the term fixed installations. It submitted that the apparatus shown within table 3 of the consultation document may be considered as such, e.g. high voltage power cables, and related transformers/control equipment.
- 4.9 The Electromagnetic Compatibility Industry Association suggested that if the proposed regulation did cover fixed installations, it would minimise disagreement about what was covered and provide an overlap with current legislation. The Radio Society of Great Britain (RSGB) and a number of other respondents, considered the definition of apparatus should include all types of apparatus and combinations of apparatus whether they are mobile, temporary, or permanently fixed. They also commented on existing provisions relating to fixed installations in the EMC Regulations (discussed further below).

Ofcom’s response

- 4.10 The Regulations are introduced to ensure that where the use of apparatus does not comply with the requirements set in the Regulations, Ofcom may, if certain conditions are met, take enforcement action against the person in possession of the apparatus. We proposed to introduce the Regulations because of evidence regarding undue interference caused by apparatus (rather than fixed installations). We therefore remain of the view that, as it stands, the Regulations should apply to “apparatus” as defined in regulation 3. The application of the Regulations to fixed installations could be reviewed in light of future evidence regarding undue interference caused by fixed installations.
- 4.11 We also note that under the EMC Regulations, for as long as a fixed installation is in operation, the responsible person⁸ is under an obligation to demonstrate its compliance with the essential requirements by having available appropriate documentation.⁹

⁸ A “responsible person” in relation to a fixed installation is defined in regulation 3 of the EMC Regulations as *“the person who, by virtue of their control of the fixed installation is able to determine that the configuration of the installation is such that when used it complies with the essential requirements.”*

⁹ Regulation 36 of the EMC Regulations.

Definition of 'Apparatus' in the Regulations

- 4.12 A number of respondents made specific mention of devices that may fall outside the definition of apparatus.
- 4.13 Numerous responses made reference to inappropriate or unshielded cables which are being used in conjunction with compliant apparatus and could act as an antenna with gain. According to some respondents, this in turn could cause electromagnetic disturbance and as cables, wires, and other passive components fall outside of the definition of apparatus, enforcement action could not be taken under the Regulations.
- 4.14 The Maritime and Coastguard Agency asked whether the definition of apparatus in the regulations specifically includes complete installed systems and also what the difference was between apparatus and appliance.
- 4.15 The RSGB, and other respondents, expressed concern that the definition of apparatus in the Regulations would not control interference caused by emissions from cables used in conjunction with PLT (power line telecommunications), VDSL (very-high-bit-rate digital subscriber line), and solar PV (photo voltaic) systems. They commented that such cables and other passive components are outside the scope of the EMC regime (and consequently not required to meet the essential requirements). They suggest that the definition of "apparatus" should be widened to cover anything connected to it that could cause or propagate emissions.
- 4.16 The Electromagnetic Compatibility Industry Association stated they are concerned that there is a gap in the Regulations because consideration has not been given to undue interference from emissions from cables. They considered it must be recognised that the emission of interference is often from the connected cables and not the apparatus itself.
- 4.17 One respondent questioned why the definition of "apparatus" refers to the performance of apparatus which is liable to be affected by electromagnetic disturbance. They further queried the distinction between "electromagnetic energy" and "electromagnetic disturbance" and the reference to the term "fortuitously".

Ofcom's response

- 4.18 The Regulations are to be made under the power in section 54 of the Act. Subsection (1) of that section provides that Ofcom may make regulations prescribing the requirements to be complied with in the case of apparatus specified in the regulations, if the apparatus is to be used. Subsection (5) then states that apparatus that may be specified in the Regulations is *"(...) apparatus which generates, or is designed to generate, or is liable to generate fortuitously, electromagnetic energy at frequencies not exceeding 3,000 gigahertz."*
- 4.19 Widening the definition of "apparatus" to include cables, wires and other passive components would therefore go beyond apparatus which generates, or is designed to generate or is liable to generate electromagnetic energy. We consider that the definition of "apparatus" is adequate and should not be widened.

Configuration of devices

- 4.20 One respondent noted that there is no definition of what "installation" means in the current and new EMC directive. The respondent submitted that "installation" is not generally taken to encompass software configuration of the device even though

incorrect software configuration could mean that the device will not avoid interference. The respondent maintained that a product could be correctly installed, maintained and used for the intended purpose but because it doesn't have correctly configured software it will not avoid interference. They further submitted that the additional application software may also be at the root cause of interference.

Ofcom's response

- 4.21 We note the point made in relation to the potential effect of software configuration however, whether an apparatus has been improperly installed will ultimately depend on the specific apparatus involved and the specific circumstances and facts of each case. Accordingly we do not consider it appropriate to define installation in the Regulations.

Exclusion of radio communications equipment (RTTE) in the Regulations

- 4.22 The Maritime and Coastguard Agency makes reference to Regulation 6 stating that it appears to exclude enforcement action against RTTE equipment which could suffer the failings listed in Regulation 4(c).

Ofcom's response

- 4.23 Radio equipment is excluded from the Regulations. Radio equipment which is not exempted under the Act must be licensed. It may only be operated under the terms, provisions or limitations of a licence or licence exemption granted or made by Ofcom. Radio apparatus is therefore already regulated and accordingly has not been included in the Regulations.

Apparatus which can be withdrawn from the EU market

- 4.24 The RSGB in its response maintained that the Regulations should also cover apparatus which can be withdrawn from the EU market in accordance with the EMC Directive or the EMC Regulations.

Ofcom's response

- 4.25 The EMC Directive and implementing regime (i.e. the EMC Regulations which implemented the EMC Directive in the UK) provide enforcement powers for the withdrawal of apparatus that do not comply with the essential requirements.
- 4.26 Accordingly action can be taken in relation to such apparatus. Further and as explained in our Notice, the Regulations must not infringe on the total harmonisation approach of the EMC Directive and the implementing regime. On the basis that enforcement powers already exist, and to avoid conflict with harmonised legislation, the Regulations apply to apparatus that cannot be withdrawn under the EMC Directive and implementing regulations. This ensures that the Regulations do not encroach upon the harmonised regime.

Protection from interference for hobby radio

- 4.27 The RSGB and several other respondents suggested that perhaps additional protection from interference should be afforded to users of amateur, CB, and short wave radio listeners (hobby radio).

- 4.28 These respondents considered that the Regulations would provide additional protection for hobby radio, specifically interference caused by poorly constructed or radiating apparatus including PLT systems, plasma televisions, and switch mode power supplies.
- 4.29 Some respondents queried whether action could be taken in respect of old cases of interference (previously investigated by Ofcom) if the Regulations are made.

Ofcom's Response

- 4.30 The Regulations are made under section 54 of the Act. This section allows Ofcom to make regulations setting requirements relating to undue interference if that apparatus is to be used. The Regulations cannot go beyond the confines of this power (*vires*). Ofcom cannot guarantee an interference free radio spectrum to any individual or stakeholder group (licensed or otherwise).
- 4.31 Ofcom provides advice and assistance to help resolve interference to spectrum users. We offer advice and assistance in relation to cases where interference occurs. Our enforcement powers are to be used in accordance with our statutory duties. This means acting impartially and in line with the principle of proportionality. These principles will be followed when taking enforcement action. Accordingly if interference still exists and depending on the circumstances of the case, Ofcom may investigate.

New EMC Directive and New Radio Equipment Directive

- 4.32 The RSGB and one other respondent submitted that two new Directives, Directive 2014/30/EU ("New EMC Directive") and Directive 2014/53/EU ("New Radio Equipment Directive") relevant to the policy and the Regulations are to be adopted by Member States by 2016 and that these would therefore necessitate amendments to the Regulations.

Ofcom's response

- 4.33 The new EMC Directive is required to be adopted by 19 April 2016. The obligation to transpose it into national law is confined to the provisions which represent a substantive amendment as compared to the current EMC Directive (Directive 2004/108/EC). As the obligation to transpose is confined to substantive amendments, we do not expect that this will result in any significant amendments to the Regulations (although we do anticipate that some amendments may be required). On that basis, we decided that the Regulations should be made as soon as possible and could be amended as and when required. Radio equipment is expressly excluded from the Regulations and therefore we do not anticipate the New Radio Equipment Directive and implementing legislation to necessitate amendments to the Regulations.

Responses on Ofcom policy

- 4.34 As stated above, in addition to the comments raised regarding the drafting of the Regulations we also received a number of comments relating to other areas of Ofcom's enforcement policy.

Reasonable steps to minimise interference

- 4.35 One respondent, the RSGB noted that pursuant to section 55 of the Act, Ofcom will consider (in cases relating to non-safety related wireless telegraphy) whether all reasonable steps were taken to minimise interference in relation to the wireless

telegraphy apparatus or wireless telegraphy station receiving the interference. The respondent suggested that guidance should be provided in relation to what might constitute reasonable steps to minimise interference.

- 4.36 Another respondent suggested that Ofcom provides information to those issued with a notice under section 55(4) of the Act on how interference can be remedied.
- 4.37 One respondent submitted that the term “undue interference” is too wide and must be agreed between Ofcom and the parties who suffer interference.

Ofcom’s response

- 4.38 Section 55 of the Act sets out the conditions to be met for Ofcom to serve a notice on a person in possession of an apparatus that does not comply with the Regulations. The provisions relating to enforcement are set out in primary legislation¹⁰. These provisions cannot be modified by regulations made under section 54(1) and therefore did not fall within the scope of our consultation. What might constitute reasonable steps under section 55¹¹, and how the interference could be remedied, will depend upon the prevailing circumstances of each case and will be judged on a case by case basis.
- 4.39 Ofcom publishes information on how to resolve interference on our website. Duty Engineering Officers at our call centre can also provide advice and assistance.
- 4.40 The term “undue interference” is defined in primary legislation. Section 115 of the Act sets out when wireless telegraphy is to be regarded as being interfered with and when interference with wireless telegraphy is to be regarded as undue for the purposes of the Act. Section 115(3) provides that “(...) *wireless telegraphy is interfered with if the fulfilment of the purposes of the telegraphy is prejudiced (...) by an emission or reflection of electromagnetic energy.*” Section 115(4) specifies that “*interference (...) is not to be regarded as undue (...) unless it is also harmful*”. It is therefore not a matter to be agreed in the manner in which the respondent suggested.

Concerns over adequate protection for safety of life services

- 4.41 The Maritime and Coastguard Agency stated it is important that safety of life and safety related services receive due priority over other considerations and receive reasonable and timely protection.

Ofcom’s response

- 4.42 Ofcom operate a ‘triage’ system when complaints of interference are received. Interference to safety of life wireless telegraphy is treated as a high priority.

Enforcement resources

- 4.43 Concern was expressed by a number of respondents regarding Ofcom’s resources in enforcing the Regulations. Reference was made to the large volume of apparatus currently in use and available on the market.

¹⁰ See sections 55 - 58 of the Act.

¹¹ See section 55(3)(c) of the Act: “the case is one where OFCOM consider that all reasonable steps to minimise interference have been taken in relation to the wireless telegraphy station or wireless telegraphy apparatus receiving the telegraphy interference with.”

- 4.44 The RSGB and a number of other respondents considered that the Regulations will raise expectations of action. They have expressed concerns on the reduction in the number of field staff over recent years (meaning that there are insufficient staff to cope with complaints from radio users); on the efficiency of processes (e.g. timing to take enforcement action); and on the need for additional investment.

Ofcom's response

- 4.45 Ofcom provides advice and assistance to help resolve harmful interference to spectrum users. Our Spectrum Engineering and Enforcement Team regularly handle reports of interference. We use and will continue to use our enforcement powers, impartially and in a proportionate manner in accordance with our statutory duties.
- 4.46 We do not anticipate a significant increase in the number of cases in which an enforcement notice would be required following the implementation of the Regulations. As a result we do not expect a need for increased resource.

Guidance to the public

- 4.47 The BBC felt that it would assist members of the public if some guidance as to the correct use of certain types of apparatus were issued in order to minimise the probability of harmful interference arising.

Ofcom's response

- 4.48 The EMC regime already requires that manufacturers supply instructions for use containing the information necessary for the apparatus to be used as intended. We do not consider it appropriate to issue additional guidance on particular types of apparatus.

Testing of apparatus

- 4.49 A number of other respondents (including the RSGB and BT) suggested that any apparatus causing interference, should be tested in 'real world' situations (in other words, in-use situations) rather than testing in laboratories.

Ofcom's response

- 4.50 The requirement in the Regulations relates to the level permissible under the requirements of the EMC Regulations. Accordingly, assessment will be carried out in a similar way as it is carried out in circumstances where it is being assessed for compliance with the level permissible under the requirements of the EMC Regulations.

Interference to wired systems

- 4.51 BT highlighted that the electromagnetic emissions can also potentially cause interference to wired systems. BT submitted that wired systems are as important to communications networks as wireless systems but noted that "(...) *since the proposed Regulations fall under the Wireless Telegraphy Act, there seems to be no obvious means by which they could be extended to also offer protection against interference into wired telecommunications network equipment.*"

Ofcom's response

4.52 The requirements we prescribe under the Regulations must be requirements for the purpose of ensuring that the use does not cause undue interference with *wireless telegraphy*¹², not wired systems. Wireless telegraphy is defined in the Act as the emitting or receiving of electromagnetic energy over paths that are not provided by any material substance (section 116 of the Act).

4.53 Accordingly, the Regulations concern wireless telegraphy not wired systems.

¹² See section 54(3) of the Act.

Section 5

Amendments to Regulations

- 5.1 Notwithstanding our decision to make the Regulations substantially as proposed, for the reasons in the Notice and above, we have made some minor amendments to the proposed version. We now refer to the “the EEA” rather than “the Community” (regulation 3).
- 5.2 We have changed the reference to the EMC Directive to refer to the Electromagnetic Compatibility Regulations (regulation 5). This is because the Electromagnetic Compatibility Regulations (rather than the EMC Directive) are directly effective in the UK.
- 5.3 Other minor amendments include: updating the date of the Regulations to 2016; adding a comma after the word “*disturbance*” in regulation 3; revising the reference to Directive 1999/5/EC in regulation 6 and adding a reference to Regulation No 596/2006 (amending Directive 1999/5/EC) in footnote (c). We have also changed the signature block to refer to the Group Director for Spectrum Policy Group and amended the Explanatory Note to reflect the minor amendments made to the Regulations.
- 5.4 The Secretary of State’s approval is expressly indicated by way of signing the Regulations prior to the making by Ofcom of such Regulations. This is reflected in the execution block in the Regulations.

Section 6

Final scope of the regulations

Ofcom's decision

- 6.1 For the reasons given, Ofcom has decided to make the Regulations as proposed, subject to the amendments described above. The Regulations are expected to come into force in early 2016.

Extent of application

- 6.2 The Regulations will apply in the United Kingdom. The subject matter of the Regulations relates to the protection of wireless telegraphy apparatus from interference caused by EMC apparatus operating within the United Kingdom.

Annex 1

Regulatory Impact Assessment

Introduction

- A1.1 Ofcom acts consistently with the Government practice that, where a statutory regulation is to be made, a Regulatory Impact Assessment (“RIA”) should be undertaken. We also comply with our duty under section 7 of the Communications Act 2003 (“the 2003 Act”) to undertake impact assessments.
- A1.2 The analysis in this RIA, together with that set out in the Notice¹³ and statement¹⁴ <http://stakeholders.ofcom.org.uk/consultations/undueinterference/> is an impact assessment relating to the Regulations. It is consistent with the Government practice on RIAs and Ofcom’s duty under the 2003 Act.
- A1.3 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 policy-making. This is reflected in section 7 of the 2003 Act, which means that generally we have to carry out impact assessments where our proposals would be likely to have a significant effect on businesses or the general public, or when there is a major change in our activities. However, as a matter of policy we are committed to carrying out and publishing impact assessments in relation to the great 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/about/policies-and-guidelines/better-policy-making-ofcoms-approach-to-impact-assessment/>
- A1.4 This RIA is substantially the same as the RIA annexed to the Notice. The reason for this is that the Regulations have not changed substantially from the draft proposed (and annexed) to the Notice and that the background and the evidence of the need for Regulations remain the same.
- A1.5 This impact assessment relates to our decision to make the Regulations in order to regulate the intensity of electromagnetic energy at which apparatus operates (when in use), for the purpose of ensuring that it does not cause undue interference with wireless telegraphy.

Background

Policy objectives and how the Regulations address the problem

- A1.6 The policy objectives of the Regulations are set out in section 4 of the Notice. Likewise, the ways in which Ofcom considers that the Regulations achieve the policy objectives and address the problems they are designed to resolve are set out in the Notice at section 4. Ofcom does not repeat, but nonetheless relies for the purposes of this impact assessment, on what we say in section 4.

¹³ “Notice of proposals to make the Wireless Telegraphy (Control of Interference from Apparatus) Regulations 2015”

¹⁴ “Decision to make the Wireless Telegraphy (Control of Interference from Apparatus) Regulations 2016”

The citizen and/or consumer interest

- A1.7 Ofcom’s 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. 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.
- A1.8 Further in performing the principal duty of furthering the interests of citizens in communications matters¹⁵. Ofcom considers that undue interference caused by apparatus could compromise communications systems,.
- A1.9 Ofcom has decided, in exercise of the powers conferred by sections 54(1) and 122(7) of the Wireless Telegraphy Act 2006 (the “Act”) to make the Regulations prescribing the requirements to be complied with in the case of apparatus specified in the Regulations, if the apparatus is to be used. As noted in the Notice, the enforcement provisions under section 55 which are dependent on secondary legislation made under section 54, permit Ofcom to serve an enforcement notice prohibiting the use of apparatus, where in the opinion of Ofcom, apparatus does not comply with the requirements set out in the Regulations and either condition in section 55(2) or (3) of the Act is satisfied. This goes to discharging our spectrum management duties, as it will secure optimal use for wireless telegraphy of spectrum and the protection of communications systems from undue interference.
- A1.10 Ofcom has considered the wider impact beyond immediate stakeholders in the communications community. We believe that the Regulations are of benefit to citizens as they will secure the optimal use for wireless telegraphy of spectrum and ensure that communications systems are functioning free from interference (e.g. communications systems used by the emergency services, air traffic control, and the coastguard).

Evidence of need for Regulations

- A1.11 Ofcom set out in section 4 of the Notice why we considered the Regulations were necessary. Additional evidence of that need was provided by the following. One respondent noted that not all the cases of interferences are reported to Ofcom resulting in “under-reporting”. We note in that regard that we could only rely on cases reported to us as we could not (by definition) be aware of unreported cases.
- A1.12 Interference complaints handled by Ofcom’s advice and assistance service¹⁶ during 2013 and 2014 were:

Table 1		
Electromagnetic disturbance case statistics	2013 - Volume of cases	2014 -Volume of cases

¹⁵ Section 3(1)(a) of the Communications Act, 2003.

¹⁶ A service Ofcom provides to persons complaining of interference pursuant to section 4 of the Act.

Number of cases where undue interference was caused to wireless telegraphy apparatus and capable of resolution under regulations made under section 54.	158	114
Number of cases where complaint resolution possible using existing regulations under section 54(1)	3	3
Number of cases requiring resolution by cooperation	155	111
Number of cases involving undue interference to emergency services communications where resolution of the problem was delayed due to inadequate secondary legislation under section 54(1)	24	20
Numbers of different types of apparatus causing undue interference to wireless telegraphy.	13	10

Table 2	2013	2014
Cases where complaint resolution possible using existing regulations under section 54(1)	3 (1.90%) Average resolution time per case: 10hrs 30 mins	3 (2.63%) Average resolution time per case: 7hrs 10 mins
Cases requiring resolution by cooperation	155 (98.10%) Average resolution time per case: 14hrs 25 mins	111 (97.37%) Average resolution time per case: 12hrs 30 mins
Total cases (capable of being resolved under regs made under s54 i.e. existing and Regs)	158 (100%) Average resolution time per case: 14hrs 20 mins	114 (100%) Average resolution time per case: 12hrs 20 mins

- A1.13 Accordingly, in 2013 and 2014, there were 158 and 114 complaints respectively, involving undue interference caused by apparatus in use that might have been capable of resolution by means of regulations made under section 54 of the Act (and the related provisions of the Act). As table 2 shows the average time it took to reach resolution within the 2013 cases was 14 hours and 20 minutes. In 2014, the average was 12 hours and 20 minutes. However, of those, only 3 cases from each year were complaints in which Ofcom would have been able to take action pursuant to the existing regulations made under section 54. The remainder fell outside those regulations.
- A1.14 This meant that in 2013, 155 complaints (note that 3 were resolved using the existing regulations), taking an average of 14 hours and 25 minutes, required resolution by seeking the voluntary cooperation of the person using the apparatus (normally by repair or replacement of apparatus). In 2014, this number was 111 which took an average of 12 hours and 30 minutes. In other words, the resolution of those complaints was totally reliant on the goodwill of the person in possession of the relevant apparatus, which they were under no obligation to act upon.
- A1.15 The risk to which this gives rise is borne out by the following. In 24 (2013) and 20 (2014) cases, delays were incurred resolving undue interference affecting emergency communications systems. Although this represents a small minority of the total cases capable of resolution by means of regulations made under section 54 of the Act (and the related provisions of the Act), the risks to public safety associated with similar cases affecting wireless telegraphy could be highly significant.
- A1.16 In addition, from relevant complaints set out in Table 1, over 2013 and 2014, 13 different types of apparatus were found to be causing undue interference. These are listed in Table 3 below¹⁷. Table 3 demonstrates that undue interference caused by apparatus in use is caused by a much broader range of apparatus than is covered by the existing regulations made under section 54.

Table 3
Control Equipment
Domestic Electric Cables
High Voltage Power Cables
Industrial Scientific Medical Equipment
IT Equipment
IT Power Supply Unit
Lighting
Power Line Adaptor
Power Supply Unit Battery Charger
Security Equipment
Transformer
TV Aerial Amplifier
TV Equipment

¹⁷ As table three below shows, the apparatus was usually a relatively low cost device (and, in some instances, the undue interference would have been resolved by simple adjustment or repair at low cost). Past Ofcom experience has shown that for larger more costly apparatus, undue interference is more likely to be as a result of maladjustment or failing components that can be adjusted or replaced.

A1.17 In light of these statistics, together with the assessment set out in section 4 of this document, Ofcom has identified a distinct and important need for intervention (in the form of the Regulations). The Regulations respond to this need.

Options considered

A1.18 The main options open to Ofcom for taking action against undue interference, and which Ofcom has considered, are:

- a) to make regulations imposing requirements on apparatus so as to enable Ofcom to take enforcement action in respect of undue interference; or
- b) not to make any new regulations and to rely on the cooperation of the apparatus user to cease the undue interference.

Analysis of options

A1.19 The following assesses the impact of options open to Ofcom.

Make new regulations

A1.20 Ofcom considers that the benefits of making the Regulations will include the following.

A1.21 First, the Regulations will meet the needs and legislative shortfalls described elsewhere in this document. In particular, they provide elements of the means, currently lacking, for Ofcom to take action in respect of apparatus in use which causes undue interference to wireless telegraphy. The Regulations will allow Ofcom to take enforcement action against persons using responsible for such apparatus. By helping to ensure that Ofcom is able to take action against undue interference the Regulations will ensure that affected communications systems can be restored to an interference-free state.

A1.22 Second, the Regulations are drafted in a way intended to keep pace with future technological advancements

A1.23 Third, the Regulations should also, in themselves and together with the prohibition notices, to which breach of them may give rise, have incentive and deterrent effects. That is, they will provide incentives to comply with the Regulations' requirement, under threat of a prohibition notice if necessary, and any notice should, with its threat of possible prosecution, deter continued use of apparatus causing relevant undue interference. As a result, the Regulations will enable Ofcom to resolve undue interference without the costs of:

- Ofcom's time and money associated with negotiating voluntary resolutions with apparatus users; and
- formal criminal proceedings.

A1.24 There will be some costs in making, and in complying with, the Regulations.

A1.25 In terms of the costs to Ofcom of making and applying the Regulations, there would be some one-off administrative costs associated with making the regulations¹⁸. These would include the costs of providing guidance and training for spectrum enforcement staff allocated enforcement responsibilities. Ofcom considers these costs likely to be limited as the Regulations will require limited guidance and training given that the spectrum enforcement staff are already familiar with the legislative framework upon which the Regulations are based.

A1.26 We consider that the additional costs to Ofcom in applying the Regulations would be limited, for the following reasons:

- we anticipate these costs being lower than Ofcom would otherwise incur in seeking voluntary resolution of relevant interference absent the Regulations; and
- a reduction in time solving such cases as the Regulations will allow immediate action; and
- a lessening of the administration burden currently associated with solving such cases.

A1.27 There would also be some costs to individuals and businesses using apparatus and to whom the Regulations and/or enforcement notices apply. Although it is very difficult to estimate the costs of the Regulations on these users, Ofcom considers that these costs are likely to be limited for the following reasons:

- The statistics set out in Table 1 above (which relate to the UK as a whole) suggest that only a small number of users will be deprived of the right to use apparatus under the Regulations. Although these numbers are relatively small, Ofcom considers that the risk to citizens and consumers as a result of undue interference to wireless telegraphy (including risks to public safety where wireless telegraphy is used for public safety purposes) is potentially significant and therefore a quick resolution is required. The Regulations are intended to expedite resolution, thereby reducing such risks.
- Ofcom notes that the Regulations principally place obligations on those using apparatus, end-users, not its manufacturers or sellers. Specifically, the Regulations do not impact or impose any additional costs for the placement of apparatus on the market and/or the putting of apparatus into service. The costs complying with obligations in those regards apply in any event under other, existing legislation (i.e. the EMC Regulations). Complying with those obligations would also be likely to go towards complying with the requirement under the Regulations, limiting any additional costs that would arise.

A1.28 Overall, Ofcom considers that the costs of the Regulations are likely to be limited and outweighed by the significant benefits of reducing the risk of undue interference to wireless telegraphy and the reduction in time it takes to resolve such cases.

¹⁸ Given the significant benefits of the Regulations (namely, ensuring that communication systems are functioning free from interference - including those communication systems used for public safety purposes), we do not believe it is necessary to quantify these costs for the purposes of this impact assessment.

Do nothing

- A1.29 Ofcom's main alternative option would be to do nothing: not making the Regulations and continue to rely on the reasonable cooperation of apparatus users to resolve any relevant undue interference.
- A1.30 Whilst this option would not impose any of the additional costs of making or applying the Regulations, Ofcom would not be able to take action in respect of apparatus in use causing relevant undue interference unless the apparatus was in the limited categories covered by existing secondary legislation. As a result, the risk that communications systems will be compromised by undue interference remains unmitigated, representing a significant risk to public safety and to businesses. The costs of this risk, especially if realised, could be highly significant.
- A1.31 In addition, in respect of many types of relevant apparatus, Ofcom would continue to incur the costs of seeking voluntarily resolution of undue interference problems that could be avoided were the Regulations made and applied.

Overall impact

- A1.32 Ofcom has assessed the overall impact of the Regulations.
- A1.33 The scope and consequential impact, of the requirement set out in the Regulations is limited, as:
- a) the requirement only applies to apparatus which has already been placed on the market or put into service;
 - b) the requirement only restricts the intensity of the electromagnetic energy to a level consistent with the maximum intensity of electromagnetic energy which was permissible at the time when the apparatus was put into service or made available on the market;
 - c) the requirement only applies to apparatus when in use;
 - d) any electromagnetic disruption suffered by wireless telegraphy must meet 'undue interference' as described in section 115(3) – (5) of the Act;

Preferred option (and adopted option)

- A1.34 In light of all the above, Ofcom's preferred option is to make (and apply) the Regulations in order to continue to meet our spectrum management duties. The Regulations are likely to impose only limited costs on stakeholders and, although they are difficult to quantify, we believe that the benefits are likely to exceed costs.
- A1.35 In particular, the Regulations are likely, in Ofcom's view, to yield the significant benefits described above. We conclude that those benefits, including the aversion of the risks and costs to public safety communications in use and the ability to keep pace with technological advances, would outweigh costs which Ofcom assesses would only be limited for the reasons given.
- A1.36 Moreover, if we did not make the Regulations we risk the inefficient use of spectrum. We would not be acting consistently with our wider spectrum management duties because, if wireless telegraphy were compromised by undue interference, and the user of the apparatus causing the interference is unwilling to

co-operate with Ofcom's requests, Ofcom would be unable to take enforcement action.

Competition assessment

A1.37 European Union harmonisation legislation (which includes the EMC Directive) applies when apparatus is placed on the European Union market and to any subsequent operation which constitutes making available until it reaches the end-user. Whereas the Regulations apply once the apparatus has reached the end-user (it is no longer considered a new product). The end-user is not one of the economic operators (e.g. manufacturers, importers and distributors) who bear responsibilities under harmonisation legislation and the Regulations do not impose impositions on the economic operators or restraints on market activities. The essential requirements under the harmonisation legislation continue to apply to economic operators and the total harmonisation approach is not infringed by the Regulations. Ofcom considers that the Regulations are very unlikely to impact on competition within the affected market.

Equality impact assessment

A1.38 Following an initial assessment of our policy proposals we considered that it was 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.

A1.39 In addition, we note that there is no available evidence to suggest that the Regulations would have a greater financial impact on groups based on gender, race or disability or for consumers and citizens relative to citizens in general. This is because one would not expect the impact of complying with the Regulations' requirement to differ significantly between these groups and consumers in general. One would also not expect the financial impact of any enforcement action necessitated by a failure to comply with the requirement, to differ significantly between these groups and consumers in general.

A1.40 In the same way that any apparatus may cause undue interference, there may be a possibility that apparatus used by disabled persons may cause interference. However, we have no evidence to suggest that this is any more likely than in respect of other apparatus. Since Ofcom was established we have not been aware of undue interference problems concerned specifically with apparatus used by disabled persons.

A1.41 We have not, therefore, carried out an Equality Impact Assessment in relation to race equality or equality schemes under the Northern Ireland and disability equality schemes. This is because we are not aware that the proposals being considered here are intended (or would, in practice) have a significant differential impact on different gender or racial groups, on citizens in Northern Ireland or on disabled citizens compared to citizens in general.

Annex 2

Respondents

1. Mr Morris
2. Mr Maltman
3. Ms S Foster
4. Name withheld 1
5. Mr A Garratt
6. Mr G Smart
7. Name withheld 2
8. Mr F Nicolson
9. Name withheld 3
10. Mr A Brookes
11. Name withheld 4
12. Mr N.G Bridle
13. Mr A Baker
14. Name withheld 5
15. D Baxter
16. Mr D Sharred
17. Mr R Smith
18. Name withheld 6
19. Mr A Fell
20. Mr D Ogg
21. Mr N Wing
22. Mr A Keddie
23. Mr G Myers
24. Name withheld 7
25. Mr R Dehli
26. Mr S Champion
27. Mr M Jones
28. Mr D Wilkinson
29. Name withheld 8
30. Name withheld 9
31. Name withheld 10
32. Mr R Mullen
33. Name withheld 11
34. Name withheld 12

35. Dr A Seeds
36. Mr A Thawley
37. Name withheld 13
38. Mr P Woods
39. Mr G Lindsay
40. Mr P Endean
41. Name withheld 14
42. Mr A Riddick
43. Mr J Cummins
44. Mr P Fox
45. Mr J Lord
46. Name withheld 15
47. Name withheld 16
48. Mr R Baines
49. Mr D Howell
50. Mr C Wiseman
51. Ms H Bignell
52. Mr D Digby
53. Mr B Murfitt
54. Dr D Fenna
55. Mr S Richards
56. Mr D De La Haye
57. Name withheld 17
58. Mr A Holder
59. Mr G Kimbell
60. Mr R Thawley
61. Mr C Langley
62. Name withheld 18
63. Mr J.P Gilliver
64. Mr P Singleton
65. Name withheld 19
66. Mr S Pryce
67. Mr A Knott
68. Name withheld 20
69. Mr B Shelton
70. Name withheld 21
71. Mr O Williams

72. Mr T Rose
73. Mr I Cooke
74. Mr L Davies
75. Mr V Brand
76. Mr S Tomlinson
77. Mr D Online
78. Mr J Rowlands
79. Mr C Reynolds
80. Name withheld 22
81. Mr N Bewley
82. Mr S Hunt
83. Mr J Fellows

A full list of non-confidential responses is published on our website available at:
<http://stakeholders.ofcom.org.uk/consultations/undueinterference/?showResponses=true>

