Decision to make the Wireless Telegraphy (Exemption and Amendment) Regulations 2010

Statement

Publication date: 20 October 2010

Contents

Section 1

Summary

1.1 This statement confirms that, following a formal consultation, the Wireless Telegraphy (Exemption and Amendment) Regulations 2010 (the "Regulations") were made by us on14 October 2010, and are coming into force on 1 November 2010**.** The Regulations can be obtained through the Office of Public Sector Information (OPSI).[1]

1.2 The Regulations permit the following devices to operate on a licence exempt basis:

- Railway level-crossing radars at 24 GHz;
- Fixed Wireless Services (FWS) at 59.1 to 63.9 GHz.; and
- 900 and 1800 MHz Universal Mobile Telecommunications System (UMTS) terminals.[2]

1.3 In addition, the Regulations also liberalise the technical criteria for:

- Short Range Devices (SRDs) below 30 MHz when operating underwater;
- High Density Fixed Satellite Services (HDFSS); and
- SRDs covered by the Commission Decision of 30 June 2010 amending Decision 2006/771/EC on harmonisation of the radio spectrum for use by short-range devices (the "SRD Decision")[3].

1.4 Before deciding to make the Regulations, in accordance with the requirements of section 122(4) of the Wireless Telegraphy Act 2006 (the "WT Act"), on 26 July 2010 we published a Statutory Notice[4] (the "Notice") containing a draft of the Wireless Telegraphy (Exemption) (Amendment) Regulations 2010 (the "Proposed Regulations") and invited comments from stakeholders. We received one response to our consultation.

1.5 On reviewing the Proposed Regulations we decided to make a number of minor changes. The changes that we introduced into the Regulations are outlined in section 3 of this document. None of the changes alter the technical parameters for the devices. The changes were designed to make the regulations clearer for stakeholders to understand.

1.6 We are required to comply with the SRD Decision, the implementation of which is mandatory on all European Union (EU) Member States, by 1 November 2010. This statement confirms that we have made the Regulations which will come into force on 1 November 2010.

[1] A link to the online version will be found at http://www.legislation.gov.uk/
[2] This does not affect the licence conditions on networks currently operating in 900 and 1800 MHz.
[3] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:166:0033:0041:EN:PDF
[4] http://stakeholders.ofcom.org.uk/consultations/wireless-telegraphy-devices/

Section 2

Introduction

2.1 Under section 8(1) of the WT Act, it is an offence to establish, install or use equipment to transmit without holding a licence, unless the use of such equipment is exempted. Section 8(4) of the WT Act requires us to make regulations to exempt equipment if its installation or use is unlikely to cause undue interference.

2.2 On 12 March 2010 we published a consultation "Licence Exemption of Wireless Telegraphy Devices Candidates for 2010" (the "Policy Consultation").[5] In this we set out a number of proposals to change the current arrangements for some licence-exempt devices as well as proposals to permit new devices. The Policy Consultation asked stakeholders for their views on the proposals. We received twelve responses to the consultation with the majority supporting our proposals.

2.3 Following the Policy Consultation, as required by section 122(4) of the WT Act, we consulted on our proposal to make the Regulations in our document "Notice of Ofcom's proposals for changes to licence exemption for Wireless Telegraphy Devices" (the "Notice"). The Proposed Regulations included measures that would implement the changes we outlined in our Policy Consultation including changes to comply with the SRD Decision.

2.4 The Notice was published on 26 July 2010 and closed on 6 September 2010. We received one response to the consultation; this is dealt with in section 3 of this document.

SRD Decision

2.5 On 30 June 2010 the SRD Decision was made by the European Commission.[6] Member States have until 1 November 2010 to implement it. Within the SRD Decision, there were no new spectrum allocations for SRD use. There were however modifications to existing licence-exempt SRD allocations. The SRD Decision required the following:

2.5.1 The addition of a note, relating to all licence exempt SRDs, making it explicit that adjacent frequency bands within an allocation could be considered as a single frequency band provided the specific conditions of each frequency band are met.

2.5.2 For medical devices, operating in the 401 to 402 MHz and 405 to 406 MHz bands a wider bandwidth operation up to 100 kHz are permitted.

2.5.3 The Duty Cycle limit in the 869.7 to 870 MHz band was increased from 0.1% to 1% for Non-specific SRDs.

2.5.4 The indoor/outdoor power restrictions for Wideband Data Transmission Systems (WBDTS) in the 57 to 66 GHz band were replaced with a single power of 40 dBm. Outdoor fixed installations are not exempt.

[5] http://stakeholders.ofcom.org.uk/consultations/devices/
[6] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:166:0033:0041:EN:PDF

2.5.5 The vast majority of allocations within the SRD Decision have no restriction limiting equipment to terrestrial use. Where terrestrial limits existed in UK regulations, for those allocations listed within the SRD Decision, these restrictions were removed.

2.5.6 Removal of the channel access protocol requirement in the 869.3 to 869.4 MHz frequency band for Non-specific devices.

Changes to licence exemption requirements

2.6 In addition to the requirements of the SRD Decision the Regulations also implement the following changes to exempt:

- Railway level-crossing radars at 24 GHz;
- Fixed Wireless Services (FWS) at 59.1 to 63.9 GHz;
- 900 and 1800 MHz UMTS terminals;
- Higher power for Short Range Devices (SRDs) below 30 MHz operating underwater;
- A 5 dBW increase in power for High Density Fixed Satellite Services (HDFSS); and
- Minor amendments to some licence-exempt SRDs.

Railway Level Crossing Radar

2.7 We now exempt the use of Railway Level Crossing Radars installed at railway level-crossings in the 24.100 to 24.350 GHz frequency band providing they operate with a maximum power limit of 500 mW e.i.r.p. We have also introduced six exclusion zones (see Figure 1) surrounding Radio Astronomy sites in order to protect them from interference from these systems – we have adjusted these very slightly from the version on which we consulted to ensure accuracy.

Figure 1: Radio Astronomy exclusion zones

Site	NGR	Exclusion zone
Jodrell Bank	02° 18’ 22.8” W 53° 14’ 06.7” N	20 km
Cambridge	00° 02’ 12.4” E 52° 10’ 00.0” N	20 km
Defford	02° 08′ 40.1” W 52° 06’ 02.0” N	20 km
Darnhall	02° 32’ 08.5” W 53° 09’ 22.7” N	20 km
Knockin	02° 59’ 49.6” W 52° 47’ 25.1” N	20 km
Pickmere	02° 26’ 43.5” W 53° 17’ 19.1” N	20 km

Source: Ofcom

2.8 Technical requirements for the equipment are set out in IR 2080.[7]

[7] http://stakeholders.ofcom.org.uk/spectrum/spectrum-management/research-guidelines-tech-info/interface-requirements/

FWS in the 59.1 to 63.9 GHz band

2.9 On 16 July 2009 we published a consultation document on making spectrum in the 59 to 64 GHz band available for Fixed Wireless Systems (FWS)[8]. The consultation also included a proposal to combine the 59 to 64 GHz band with the existing 57 to 59 GHz licence-exempt band. This would create a new contiguous block of spectrum from 57.1 to 63.9 GHz. On 11 December 2009 we confirmed that we were to go ahead with this decision.[9]

2.10 The 59 to 64 GHz band is jointly managed by Ofcom for Fixed Service applications and the Ministry of Defence (MoD) for Mobile and Radiolocation applications. In order to protect MoD radiolocation systems we have introduced three exclusion areas in the Regulations where the licence exemption will not apply. The areas are listed in Figure 2.

Figure 2: 59 to 64 GHz band licence exempt exclusion zones

Site Name	Site Location	Radius of exclusion zone from the centre of site location
Site 1	07° 23' 36.6" W, 57° 21' 3.6" N	6 km
Site2	04° 58' 21" W, 51° 37' 16.8" N	6 km
Site 3	00° 36' 22.8" W, 52° 38' 1.8" N	6 km

Source: Ofcom

2.11 The technical criteria for FWS operating in the 57.1 to 63.9 GHz band are outlined in IR 2078.[10]

900 and 1800 UMTS terminals

2.12 UMTS is a more universally known as 3G and enables users faster access to multimedia and data services due to greater download speeds. The European Commission has directed Member States to allow the use of UMTS in the 900 and 1800 MHz frequency bands. The Regulations now permit the licence-exempt use of UMTS terminals operating at 900 and 1800 MHz. Previously the equipment could only operate at 1920 to 1980 MHz. This exemption is restricted to 3G mobile terminals and does not affect the licence conditions of 900Mhz and 1800Mhz networks.

Underwater SRDs below 30 MHz

2.13 Underwater radiocommunication systems generally only work successfully at very low frequencies. Electromagnetic propagation through water is very different from propagation through air because of water's high permittivity and electrical conductivity. In general, propagation distance decreases with increase in radio frequency and the physical characteristics of water compound this effect.

2.14 The Regulations now permit higher power limits for underwater apparatus in the 9 to 30,000 kHz frequency band. Equipment may use a maximum power limit, when operating under the waterline, of 40 dBuA/m. We envisage that the power be measured at a distance of 10m. Devices are required to incorporate measures to

[8] http://www.ofcom.org.uk/consult/condocs/59_64ghz/condoc.pdf
[9] http://stakeholders.ofcom.org.uk/binaries/consultations/59_64ghz/statement/statement.pdf
[10] http://stakeholders.ofcom.org.uk/spectrum/spectrum-management/research-guidelines-tech-info/interface-requirements/

prevent the in-air power transmission being above what is allowed for licence-exempt devices operating in this frequency band. A pressure sensor or similar mechanism that turned off the transmitter when above the waterline may prove to be an effective way of manufacturers ensuring apparatus meets this requirement.

2.15 Technical limits for underwater and in-air power transmissions can be found in IR2030.[11]

HDFSS

2.16 HDFSS is a generic term for satellite technology designed to provide two-way broadband Internet and multi-media access. It includes all applications of qualifying earth stations[12] operating in the Fixed Satellite Service (FSS) (including Very Small Aperture Terminals (VSATs)) and uses small, low-power earth stations and antennas (often less than one metre), allowing for flexible, rapid and widespread deployment of networks. HDFSS in rural areas of the UK should help to deliver broadband, interactive digital television and High Definition (HD) television to those areas not served by terrestrial delivery.

2.17 We now permit the licence-exempt use of HDFSS in the 27.5 to 27.8185 GHz, 28.4545 to 28.8265 GHz and 29.4625 to 30 GHz bands in 2006. Originally we set the maximum e.i.r.p. to 50 dBW. We have now increased the e.i.r.p. permitted for uncoordinated earth stations in these bands to less than or equal to 55 dBW.

2.18 Technical limits can be found in IR2066.[13]

Minor amendments to SRDs

2.19 We have implemented the changes outlined in our Policy Consultation concerning a number of small changes to equipment that is currently licence-exempt. These included some corrections in IR2030 and some changes in conformity with the recommendation of the European Conference of Postal and Telecommunications Administrations (CEPT)[14] (the "Recommendation").

2.20 The following changes have been incorporated into IR2030 - we have

2.20.1 Increased the permitted power for Inductive Devices in the 60.25 to 70 kHz band to 72 dBuA/m from the present 69 dBuA/m limit and in the 70 to 90 kHz band to 72 dBuA/m from the present 48 dBuA/m limit (as per the Recommendation).

2.20.2 Permitted alternative power and sweep rate conditions in the 24.05 to 24.15 GHz band for vehicle radar (as per the Recommendation).

2.20.3 Removed channel restrictions for 2.4 GHz and 5.8 GHz Wireless Video Cameras – non broadcast (because a more liberal exemption existed for non-specific devices).

---

[11] http://stakeholders.ofcom.org.uk/spectrum/spectrum-management/research-guidelines-tech-info/interface-requirements/

[12] Any terminal with an e.i.r.p. ≤ 50 dBW in the designated bands.

[13] http://stakeholders.ofcom.org.uk/spectrum/spectrum-management/research-guidelines-tech-info/interface-requirements/

[14] http://www.erodocdb.dk/Docs/doc98/official/pdf/REC7003E.PDF[15]
http://www.legislation.gov.uk/uksi/2003/74/pdfs/uksi_20030074_en.pdf

2.20.4 Removed airborne restrictions for 5.8 GHz Radio Determination Applications (because a more liberal exemption existed for non-specific devices).

Section 3

Scope of Regulations

Responses to the Notice

3.1 We received one response to the Notice, from Norlink Services Limited. It objected to the proposals to licence exempt UMTS 900 and 1800 MHz terminals subject to Regulation 4(2) of the Wireless Telegraphy (Exemption) Regulations 2003 (the "2003 Regulations")[15], which means that "apparatus which is established, installed or used to provide or to be capable of providing a wireless telegraphy link between telecommunication apparatus or a telecommunication system and other such apparatus or system, by means of which a telecommunication service is provided by way of business to another person", is not exempt.

3.2 We carefully considered Norlink's submission. However, we remain of the view that it is appropriate that the exemption for UMTS 900 and 1800 MHz terminals should be subject to Regulation 4(2).

Modifications to the regulations

3.3 In the Notice we proposed to amend the 2003 Regulations by making the Proposed Regulations. On reflection, we have made a new set of regulations which are shorter and clearer. The Regulations revoke those sections of the 2003 Regulations that apply to the devices in the Regulations. The Regulations amend the 2003 Regulations in relation to network user stations.

3.4 We have not recreated, in these new regulations, requirements for SRDs and FWS that only applied to equipment taken into service before 1st May 2000. This is because the provisions were additional to the basic requirement that equipment comply with the current relevant interface requirement and not cause undue interference. Very little equipment this old is likely to remain in service today, but to the extent that it does, removal of these provisions is deregulatory.

3.5 As set out above, we have made small adjustments to the co-ordinates for railway level crossing exclusion zones to ensure accuracy. We have corrected drafting errors.

Final scope of the Regulations

The Legislative Framework

3.6 We can exempt the establishment, installation and use of wireless telegraphy equipment by making Regulations under section 8(3) of the WT Act. Under section 8(1) of the WT Act, it is an offence to establish, install or use equipment to transmit without holding a licence granted by us unless the use of such equipment is exempted. Under section 8(4) of the WT Act, we must make regulations to exempt equipment if its installation or use is unlikely to cause undue interference.

Extent of application

3.7 The Regulations apply in the United Kingdom, Jersey, Guernsey and Isle of Man.

[15] http://www.legislation.gov.uk/uksi/2003/74/pdfs/uksi_20030074_en.pdf

The Regulations

3.8 The Regulations made the following changes:

3.8.1 Regulation 3 revokes the Wireless Telegraphy (Short Range Devices) (Exemption) Regulations 2009 and parts of the 2003 Regulations as set out in the Schedule 1 of the Regulations, as these are recreated (with modifications) in Regulations 5, 6 and 7 below.

3.8.2 It also amends Schedule 3 of the 2003 Regulations for network user stations by adding new frequencies to the list of frequencies within which UMTS user terminals are permitted to operate.

3.8.3 Regulation 4 creates a new exemption for Railway Level Crossing Radar. It sets out the technical criteria that 24.100 to 24.350 GHz equipment must meet in order to be exempt. This includes six twenty kilometre exclusion zones within which the exemption does not apply.

3.8.4 Regulation 5 exempts SRD's that are contained in IR 2030 providing they operate within the mandated technical conditions. This implements both the requirements of the SRD Decision, and our other proposals relating to short range devices.

3.8.5 Regulation 6 provides an exemption for FWS operating in the 57.1 to 63.9 GHz band, providing they comply with IR 2078. The regulation also includes three six kilometre exclusion zones within which the exemption does not apply.

3.8.6 Regulation 7 provides an exemption for HDFSS equipment at the new permitted power level as set out in IR 2066.

Annex 1

Impact Assessment

Introduction

A1.1 In accordance with Government practice, where a statutory regulation is proposed, a Regulatory Impact Assessment ("RIA") must be undertaken. The analysis presented here, when read in conjunction with the rest of this document, represents an RIA as defined by section 7 of the Communications Act 2003 ("the Communications Act").

A1.2 RIAs 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 and are commonly used by other regulators. This is reflected in section 7 of the Communications Act, which means that we will generally carry out impact assessments where 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. In accordance with section 7 of the Communications Act, in producing this RIA, we have had regard to such general guidance as we consider appropriate including related Cabinet Office guidance. 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.

Background

A1.3 In the UK, we are responsible for authorising civil use of the radio spectrum and achieve this by granting wireless telegraphy ("WT") 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. Under section 8(1) of the WT Act, it is an offence to install or use equipment to transmit 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 equipment if it is unlikely to cause undue interference.

Proposal

A1.4 This RIA relates to the decision to make the Wireless Telegraphy (Exemption and Amendment) Regulations 2010 (the "Regulations"). The Regulations liberalise the licence exemption criteria for low powered devices. The changes fall into the following categories:

- Measures to introduce the new technology e.g. Railway Level Crossing Radars;
- Measures to open the spectrum in the 59 to 64 GHz band for Fixed Wireless Systems (FWS) and to combine this with the existing 57 to 59 GHz band under one overall licence exempt authorisation approach for FWS;
- Measures to enable UMTS terminals to operate at 900 and 1800 MHz;
- Measures to liberalise current licence exemption criteria for low power devices:

- High Density Fixed Satellite Services (HDFSS);
- Underwater system use below 30 MHz; and
- A range of SRDs.

The citizen and/or consumer interest

A1.5 Our principal duty under section 3 of the Communications Act 2003 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. In making these changes we considered the wider impact beyond immediate stakeholders in the radiocommunications community. We believe that our decision will be of benefit to consumers for the following reasons:

i) The measures all 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;

ii) The measures will help improve safety for citizens when using railway level crossings;

iii) Licence-exemption is only for areas where use of equipment is unlikely to cause harmful interference to other spectrum use; and

iv) The exemptions supported the introduction of new and innovative technologies that will be of benefit to consumers in general.

A1.6 We are required by statute to assess the impact of all our functions, policies, projects and practices on race, disability and gender equality – an Equality Impact Assessment (EIA) is our way of fulfilling these obligations. Our EIA initial screening showed that this decision will have little impact in equality terms save in relation to citizens with a hearing impairment. We made an administrative change permitting the use of Assistive Listening Devices onboard an aircraft. We believe that this will have a positive effect on users, although the use of all radio apparatus on aircraft remains within the control of aircraft operators and the civil aviation regulations.

Our policy objective

A1.7 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 WT licence provided they comply with the terms of the Regulations.

A1.8 In accordance with the WT Act, we aim to exempt from licensing the use of specified equipment where it is not likely that such use will cause undue interference to other legitimate users of the radio spectrum. We are required to

implement European Union (EU) legislation relating to radio spectrum and from time to time this requires licence exemption arrangements to be changed.

Options considered

A1.9 All the licence-exemption measures considered in our decision involved removing regulatory burdens on stakeholders.

A1.10 Some of the measures also implemented a European Commission (EC) Decision that required allocation of specified spectrum bands to short range devices (SRDs).

A1.11 In considering whether spectrum should be made available for a particular use, we balanced the value of the proposed use of the band against existing and potential future uses. Such judgements typically require assumptions to be made about potential future uses of each band and the potential markets (and producer and consumer benefits) that may arise. Quantitative estimates would involve significant uncertainty and are unlikely to give a robust basis for analysis. Instead our approach was to gather available information on the potential demand from other uses for the spectrum and make qualitative assessments of the relative benefits and costs of the proposed use.

A1.12 Our consideration also took into account whether the appropriate means of authorising use is through exemption. Generally, licence-exemption is less onerous than licensing. Our analysis took this proposition as starting point and then focused on whether there might be concerns over harmful interference to existing users in the band (if there are any) or potential new users. In theory harmful interference could negate the benefits of any reductions in the regulatory burden.

A1.13 We are required to implement EC Decisions by law. Therefore, our analysis of measures that involve implementation of EC Decisions is less detailed than for our own policy initiatives. Each of the measures required are associated with costs and benefits. However, if we did not implement an EC Decision, the EC and others could begin legal proceedings against the UK, the costs of which we deem to be potentially very high both quantitatively and qualitatively, outweighing any costs we consider to be associated with correct implementation.

Analysis of options

Removing regulatory burdens

A1.14 Table A.5.1 below presented our analysis of measures which dealt with our decisions that remove regulatory burdens on spectrum users. The table considers the arguments for authorising versus not authorising the use/change proposed. In considering whether use should be authorised or not, we assessed the potential demand for the spectrum from alternative uses and whether licence-exemption could mean that potentially more valuable uses could be excluded from the spectrum.

Table A.5.1: Assessment of costs and benefits of authorising vs. not authorising use

Device	Description of exemption	General benefit of authorising	Potential costs
Railway Level Crossing Radars	Permit the use of Railway Level Crossing Radars in the band 24.1 to 24.35 GHz. Devices will have a permitted e.i.r.p. of 500mW. Installations will only be allowed at railway level crossings and subject to a 20 km exclusion zone around six Radio Astronomy sites.	Improving the safety of citizens when using railway level crossings. Help to reduce the number of causalities and fatalities by providing adequate warning to ongoing trains of a potential hazard.	There are already a number of other Short Range Radar operating at 24 GHz. There is a potential risk to Radio Astronomy sites but the 20 km exclusion zone should reduce any potential interference to levels that are not likely to be harmful.
57 to 64 GHz Fixed Links	To open spectrum in the 59 to 64 GHz band for Fixed Wireless Systems (FWS) and to combine this with the existing 57 to 59 GHz band under one overall licence exempt authorisation approach. Installations will be subject to three exclusion zones in the 59 to 63.9GHz band.	Creates one contiguous and flexible block of spectrum providing 6.8 GHz of available bandwidth (57.1 to 63.9 GHz taking into account two 100 MHz guard bands) for short hop FWS systems. Change will facilitate easy and fast access to the new any combined band without any administrative burden.	No information on deployments – location and usability/density. Potential difficulty around enforcement of the MoD's exclusion zones as we would not have detailed transmitter location records. However, this is not considered a real difficulty in practice for this band due to the geographic location of the exclusion zones and the type of FWS applications to be exempted.
HDFSS Low-power satellite earth stations	Liberalise licence exemption in bands 27.50 to 27.8185 GHZ, 28.4585 to 28.8265 GHz and 29.4625 to 30 GHz for low power stations from 50 dbW to 55 dbW.	Benefits business by promoting the availability of broadband and multimedia services in rural areas. Change would enable increase in potential download speeds from 1 to 2Mbit/s up to a rate of 2 to 10Mbit/s or greater, depending on atmospheric conditions.	There is little evidence of current or future demand for the band from alternative uses. In principle, the band could be used for Broadband Wireless Access (BWA) services. However, we have already awarded spectrum in the bands 10, 28, 32 and 40 GHz and indications are that this is likely to be sufficient to meet demand for BWA use in these frequency ranges.
Underwater communications under 30 MHz	Proposal to allow a power of 40 dBuA/m for devices operating underwater in 9 – 30000 kHz band.	Benefits to divers and offshore industry from being able to use higher power systems underwater. As they are operating underwater and the limit for in-air emissions is the same the likelihood of interference	Potential for in-air interference if devices cannot stop transmissions at the water line. There is currently no harmonised standard to measure devices not operating through the air

Device	Description of exemption	General benefit of authorising	Potential costs
		to existing users should be low.	and one may need to be developed before equipment could successfully be placed on the market.
All SRDs	Adjacent frequency bands within an allocation can be combined to create a single band provided the specific conditions of each frequency band are met.	Will enable the introduction of new wide band devices this will help encourage innovation. Compliant with SRD Decision.	None, as the devices must operate with the parameters already set out for the licence exempt devices.
Medical Devices	For the 401 to 402 and 405 to 406 MHz bands permitted band width increased to 100 kHz	Increased bandwidths would enable devices to transfer more data and would help encourage the development of new devices in this area. Compliant with SRD Decision.	The equipment is already licence exempt and existing users can continue to operate services. It is not expected that the increase in bandwidth would have an impact on other services.
Non-Specific SRDs	In the 869.7 to 870 MHz band increase the duty cycle from 0.1 to 1%.	It would enable more frequent and longer duration transmissions. This would help encourage the development of new devices in this area as more information could be transferred. Compliant with SRD Decision.	The equipment is already licence exempt and existing users can continue to operate services. It is not expected that the increase in duty cycle would have an impact on other services.
Radio Determination Applications	Removal of the airborne restriction in the 5.8 GHz band.	Removal of unnecessary constraints on the channel plan within the allocated band. This proposal brings the UK allocation in line with the SRD Decision. In addition it does not stop operators from continuing to use their equipment as they were before.	The equipment is already licence exempt and existing users can continue to operate services.
Inductive Applications	Increase the permitted power for Inductive Applications in the 60.25 to 70 kHz band to 72 dBuA/m from the present 69 dBuA/m limit and in the 70 to 90 kHz band to 72 dBuA/m from the present 48 dBuA/m limit	Removal of unnecessary constraints on the channel plan within the allocated band. This proposal brings the UK allocation in line with the Recommendation. In addition it does not stop operators from continuing to use their equipment as they were before.	The equipment is already licence exempt and existing users can continue to operate services.

Device	Description of exemption	General benefit of authorising	Potential costs
Wideband Data Transmission Systems	Implement a single power limit of 40 dBm for indoor and outdoor systems (note outdoor fixed installations not permitted)	Removal of unnecessary constraints on the channel plan within the allocated band. This proposal brings the UK allocation in line with the SRD Decision. In addition it does not stop operators from continuing to use their equipment as they were before.	The equipment is already licence exempt and existing users can continue to operate services.
Vehicle Radar	Permit alternative sweep rate and power conditions in the 24.05 to 24.15 GHz band.	Removal of unnecessary constraints on the channel plan within the allocated band. This proposal brings the UK allocation in line with the Recommendation. In addition it does not stop operators from continuing to use their equipment as they were before.	The equipment is already licence exempt and existing users can continue to operate services. Tests have shown that the deployment of these systems will have no impact on existing devices in the band.
Wireless Video Cameras – Non Broadcasting	Removal of the channel bandwidth restriction in the 2.4 GHz and 5.8 GHz bands.	Removal of unnecessary constraints on the channel plan within the allocated band. This proposal brings the UK allocation in line with the Recommendation. In addition it does not stop operators from continuing to use their equipment as they were before.	The equipment is already licence exempt and existing users can continue to operate services.
UMTS terminals	Permit the use of UMTS handsets at 900 and 1800 MHz.	In line with European Commission Decision on allowing use of this technology in these bands.	The equipment is already licence exempt and the introduction of the new frequencies does not prevent existing users to continue to operate in the band.

A1.15 In summary, we considered that there was a good case for authorising the use proposed in each case. In particular, no compelling evidence found that there was likely to be current or future demand for the spectrum from other more valuable uses.

A1.16 We also considered that implementing the measures listed above is likely to generate a net benefit for UK businesses 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 each proposal). In particular, we considered that each measure is unlikely to impose costs on other users. Therefore if there is any benefit then the overall impact of each measure is likely to be positive.

A1.17 As regards the exemption for UMTS user stations, the Government has requested Ofcom not to change the licensing position as regards user stations in existing frequencies. Given that decision, we did not think it was appropriate to apply a different licensing regime in relation to user stations in the new frequencies.

Costs to business

A1.18 Our assessment of the potential costs to business from each of the licence-exemption measures is detailed in the sections above under analysis of the options. Costs to business could have arisen insofar as the impact on business use of the spectrum. However, for each of the measures our view was that the potential impact on other users of the spectrum, in terms of the risk of interference or increased congestion, was low. Hence, we consider that each of the measures would impose very little cost on business.

A1.19 Moreover, costs to business are likely to be lower under a licence-exemption approach than the alternative of a licensed approach, since licence-exemption represents the least cost regulatory approach to the authorisation of spectrum use. For example if use of spectrum is authorised through a WT licence, businesses face administrative costs associated with applying for the licence. Businesses could face additional costs depending on the method of award of the licence. If licences are awarded by means of an auction, businesses face the costs (including management time) of participating in the auction. If licences are awarded on a first come first served basis, businesses typically incur the administrative costs of the initial application and annual renewal of licences.

Costs to us

A1.20 There are one-off administrative costs associated with making a Statutory Instrument. We considered 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 an annually renewable licence scheme if licences are awarded on a first come first served basis. Moreover, the costs such as they are will also be offset by the benefits to business and consumer outlined above. There may also be a slight reduction in spectrum management costs in certain areas through licence exemption.

Annex 2

List of respondents

Norlink Services Limited