Wireless Telegraphy Licence Exemption

Ofcom's proposals to amend the Wireless Telegraphy (Automotive Short Range Radar) (Exemption) (No.2) Regulations 2005

Statutory Notice

Publication date: 14 November 2007

Closing Date for Responses: 17 December 2007

Contents

Section 1

Executive Summary

Introduction

1.1 In January 2005, as part of its eSafety initiative to improve road safety in Europe, the European Commission adopted a Decision (2005/50/EC)[1] (the "Decision") on the harmonisation of the 24 GHz range radio spectrum band (21.65 to 26.65 GHz) for the time-limited use by automotive short range radar equipment ("SRR equipment") in the community. The Decision required that the 24 GHz band be designated and made available for SRR equipment until 30 June 2013. A copy of this Decision is available in Annex 4 of this document.

1.2 All Member States were required to implement the Decision by 1st July 2005. In order to do this, we made the Wireless Telegraphy (Automotive Short Range Radar) (Exemption) (No.2) Regulations 2005[2]. The Regulations were subject to public consultation that closed on 23 May 2005[3].

1.3 In order to protect existing radio astronomy services, the Decision required the deactivation of SRR equipment operating in the 22.21 – 24.00 GHz band within defined exclusion zones around UK Radio Astronomy sites. Details of these exclusion zones are included in Annex 3 of this document.

1.4 Article 6 of the Decision required that equipment operating in the frequency band between 22.21 GHz and 24.00 GHz must be automatically or manually deactivated within exclusion zones which surround radio astronomy sites. The Article limited the time period in which equipment that relied on manual deactivation could be put into service. In line with this, and as we previously stated[4], we are amending the regulations to remove that option (unless replacing equipment installed prior to the cut off date).

1.5 We plan to implement this change by making the Wireless Telegraphy (Automotive Short Range Radar) (Exemption) (No.2) (Amendment) Regulations 2007 (the "Proposed Regulations"). A draft version of the Proposed Regulations can be found in Annex 2.

1.6 In accordance with the requirements of section 122(4) of the Wireless Telegraphy Act 2006 (the "WT Act") this document enables stakeholders to comment on the drafting of the Proposed Regulations. We do not consider it appropriate to first conduct a policy consultation as implementing the Proposed Regulations is mandatory to ensure that we comply with the Decision to authorise the use of SRR equipment at 24 GHz.

Responding to this consultation

1.7 This consultation document provides an opportunity to make representations about the Proposed Regulations as the means by which we intend to transpose the EC

[1] Available at http://europa.eu.int/eur-lex/lex/LexUriServ/site/en/oj/2005/l_021/l_02120050125en00150020.pdf.
[2] Available at http://www.opsi.gov.uk/si/si2005/20051585.htm
[3] Notice of Ofcom's proposal to exempt the use of automotive short-range radar equipment at 24 GHz from Wireless Telegraphy licensing. Available at http://www.ofcom.org.uk/consult/condocs/24ghz/24ghz.pdf.
[4] Ofcom's decision to exempt the use of automotive short-range equipment in the 24 GHz band from Wireless Telegraphy licensing. Available at http://www.ofcom.org.uk/consult/condocs/24ghz/statement/261155/.

Decision on SRR into UK legislation rather than seeking views on the content of the Decision itself. The full text of the Decision is set out at Annex 4 of this document and the Proposed Regulations giving effect to the Decision are included at Annex 2.

1.8 Responses should be sent to us in accordance with the instructions set out in Annex 5 and should reach us no later than **5pm** on **10 December 2007**.

Next steps

1.9 Following the closure of this one month and one day consultation and having considered responses, we plan to issue a statement including the final Regulations that should, allowing for issues raised in response to this consultation, implement the proposals outlined in this document.

Section 2

Introduction

Background

2.1 This document discusses the proposal to make the Proposed Regulations to amend the Wireless Telegraphy (Automotive Short Range Radar) (Exemption) (No.2) Regulations 2005 (the "SRR Exemption Regulations") in order to remove the time limited option of using equipment that can be manually deactivated when the vehicle is operating within the exclusion zones surrounding radio astronomy sites. The SRR Exemption Regulations were consulted on and implemented during 2005[5].

2.2 As certain radio astronomy services are particularly sensitive to interference from Automotive Short Range Radar ("SRR") equipment the Decision facilitated the creation of exclusion zones around radio astronomy sites as defined by Member States. Within these zones the use of SRR equipment operating in the radio astronomy band 22.21- 24.00 GHz is not permitted. In the UK there are 5 such sites and Ofcom defined exclusion zones around these sites. The exclusion zones are of limited extent (see Annex 3 for details).

2.3 In our previous consultation on the use of SRR in the 24 GHz band, we received a number of representations from existing users of the band dissatisfied with the Decision. However, we reiterate the points made in response to the comments received previously, namely that the UK has no option but to implement the EC Decision and that the Commission was informed in making the Decision by compatibility work undertaken by the European Conference of Postal and Telecommunications Administrations (CEPT), which considered the other users of the band.

2.4 The Decision on the use of automotive SRR in the 24GHz band was made following the CEPT work on the compatibility between automotive SRR equipment and other uses of the 24 GHz band. EC Report 023[6] concluded that SRR at 24 GHz was not assumed to present high interference potential to the majority of services in the band. The report focused on the services it considered to be most at risk of interference and this formed the basis of the EC Decision. The interference assessment study and Decision identified radio astronomy exclusion zones as the only mitigation technique. However other techniques may be permitted if they are deemed necessary in order to offer equivalent protection.

2.5 Article 6 of the Decision required that equipment operating in the frequency band between 22.21 GHz and 24.00 GHz must automatically or be capable of manual deactivation within exclusion zones which surround radio astronomy sites to benefit from the exemption. That Article limited the period in which manual deactivation of equipment would be accepted for SRR equipment to that put into service before 30 June 2007.

[5] Available at http://www.ofcom.org.uk/consult/condocs/24ghz/statement/261155/ and http://www.ofcom.org.uk/consult/condocs/24ghz/24ghz.pdf.

[6] Available at http://www.ero.dk/documentation/docs/doc98/official/Word/ECCREP023.DOC .

Document Structure

2.6 The remainder of this document is structured as follows:

a) Section 3 describes the proposal relating to the amendment of the SRR Exemption Regulations;

b) The Regulatory Impact Assessment for the Proposed Regulations can be found in Annex 1;

c) A draft copy of the Proposed Regulations is contained in Annex 2;

d) Information on the exclusion zones surrounding radio astronomy sites can be found in Annex 3;

e) A copy of the Commission Decision is included in Annex 4; and

f) Information on responding to this consultation and our consultation principles is contained in Annexes 5, 6 and 7.

Section 3

General effect of the draft Wireless Telegraphy (Automotive Short Range Radar) (Exemption) (No.2) (Amendment) Regulations 2007

3.1 Under section 8(1) of the Wireless Telegraphy Act 2006 ("WT Act") it is an offence to install or use equipment to transmit without holding a licence granted by Ofcom, unless the installation or use of such equipment is exempted. Ofcom can exempt the establishment, installation and use of wireless telegraphy equipment by making regulations under section 8(3) of the WT Act.

3.2 A draft copy of the Proposed Regulations is set out at Annex 2 of this document.

Extent of application

3.3 The SRR Exemption Regulations apply in the United Kingdom, the Channel Islands and Isle of Man, and we anticipate the Proposed Regulations will also apply subject to formal agreement of the Island Authorities.

Proposal details

3.4 For the purpose of these Regulations, SRR equipment has been defined in the SRR Exemption Regulations as equipment installed in a vehicle providing radar functions for collision mitigation and traffic safety applications.

3.5 Regulation 2 of the Proposed Regulations makes amendments to update references from the Wireless Telegraphy Act 1949 to the Wireless Telegraphy Act 2006.

3.6 Regulation 2 also seeks to amend regulation 4(7)(b) of the SRR Exemption Regulations. The effect of the proposed change is to preserve the time limited exemption for both automatically deactivating and manually deactivating equipment put into service in the Community before the date on which the Proposed Regulations will come into force. However, equipment put into service in the Community on or after the date the Proposed Regulations come into force will only be permitted if it automatically deactivates when the vehicle is within an exclusion zone around the radio astronomy sites.

Annex 1

Regulatory 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") for amending the Wireless Telegraphy (Automotive Short Range Radar) (Exemption) (No.2) Regulations 2005 (the "SRR Exemption Regulations") .

A1.2 You should send us any comments on this RIA by the closing date for this consultation. We will consider all comments before deciding whether to implement our proposals.

A1.3 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

A1.4 In the UK, we are responsible for the authorising of civil use of the radio spectrum and achieve this by granting wireless telegraphy licences under the Wireless Telegraphy Act 2006 (the "WT Act") and by making Regulations exempting users of particular equipment from the requirement to hold such a licence. 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.

A1.5 A Decision to allow the use of the automotive short range radar in the 24 GHz band within the Community was published on 25 January 2005 and implemented in the UK through the SRR Exemption Regulations in 2005. The full text of the Decision is reproduced at Annex 4 of this document.

Proposal

A1.6 This RIA relates to the proposal to make new regulations (the "Proposed Regulations") which slightly amend the SRR Exemption Regulations in order to comply with a time-related aspect of the Decision.

The citizen and/or consumer interest

A1.7 We take account of the impact of our decisions upon both citizen and consumer interests in the markets we regulate. As a Member State, the UK is bound by the terms of the Decision and the requirement to implement them.

Our policy objective

A1.8 As a Member State, the UK is bound by the terms of the Decision and the requirement to implement them.

Options considered

A1.9 The options open to Ofcom in relation to the implementation of the Decision are as follows:

- to make the Proposed Regulations that are compliant with the Decision; or
- to do nothing.

Analysis of options

Make new regulations

A1.10 The most efficient route to mandatory compliance is to make the Proposed Regulations that are consistent with the Decision as closely as possible.

Do nothing

A1.11 By doing nothing, we would be in breach of the Decision and could be open to infraction proceedings initiated by the European Commission.

Evaluation

A1.12 Article 5 of the Decision requires that that the continued availability of this spectrum for short-range radar applications be kept under active scrutiny to ensure that the main premise of the opening this band to such systems remains valid. In addition that a fundamental review of the initial assumptions concerning the operations of SRRs be carried out by 31 December 2009.

A1.13 We will assist the Commission in carrying out these reviews as required.

The preferred option

A1.14 The preferred option therefore is to make the Proposed Regulations as indicated in order to comply with the Decision. The benefits of this option are that the UK remains compliant with European Community law and that the prospects of interference within the exclusion zones is minimised to the extent that an increasing proportion of SRRs will automatically deactivate when operating in a vehicle when it is within an exclusion zone.

Annex 2

Draft Regulations

DRAFT STATUTORY INSTRUMENTS

2007 No.

ELECTRONIC COMMUNICATIONS

The Wireless Telegraphy (Automotive Short Range Radar) (Exemption) (No. 2) (Amendment) Regulations 2007

Made - - - -	*[ ] 2007*
Coming into force - -	*[ ] 200[7]*

The Office of Communications ("OFCOM") make the following Regulations in exercise of the powers conferred by section 8(3) of the Wireless Telegraphy Act 2006([7]) ("the Act").

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

Citation and commencement

1. These Regulations may be cited as The Wireless Telegraphy (Automotive Short Range Radar) (Exemption) (No. 2) (Amendment) Regulations 2007 and shall come into force on [date].

Amendment of the Wireless Telegraphy (Automotive Short Range Radar) (Exemption) (No. 2) Regulations 2005

2.—(1) The Wireless Telegraphy (Automotive Short Range Radar) (Exemption) (No. 2) Regulations 2005([8]) are amended in accordance with the following provisions of this regulation.

(2) In regulation 3 for "section 1(1) of the Wireless Telegraphy Act 1949" substitute "section 8(1) of the Wireless Telegraphy Act 2006([9]) ("the Act")";

(3) In regulation 4(6) for "section 1(1) of the Wireless Telegraphy Act 1949" substitute "section 8(1) of the Act";

(4) Replace regulation 4(7) in its entirety with:

> "(7) Equipment operating in the frequency band between 22.21 gigahertz and 24.00 gigahertz must where the equipment has been established or installed in a vehicle put into service in the Community before [date] —

([7]) 2006 c.36
([8]) S.I. 2005/1585
([9]) 2006 c.36

(a) automatically deactivate so that all emissions cease while the vehicle in which it is established or installed is within an exclusion zone; or

(b) be capable of manual deactivation so that all emissions cease while the vehicle in which it is established or installed is within an exclusion zone."

(5) After regulation 4(7) insert the following paragraph:

"(8) Equipment operating in the frequency band between 22.21 gigahertz and 24.00 gigahertz must where the equipment has been established or installed in a vehicle put into service in the Community on or after [date] automatically deactivate so that all emissions cease while the vehicle in which it is established or installed is within an exclusion zone."

Chief Executive of the Office of Communications
[Date] For and by the authority of the Office of Communications

EXPLANATORY NOTE

(This note is not part of the Regulations)

These Regulations amend the Wireless Telegraphy (Automotive Short Range Radio Radar) (Exemption) (No. 2) Regulations 2005 (S.I. 2005/1585) (the "principal Regulations") which exempt the establishment or installation of automotive short range radar equipment in a vehicle and the use of automotive short range radar equipment so established or installed from the requirement to be licensed under section 8(1) of the Wireless Telegraphy Act 2006 (c. 36). The principal Regulations implemented the Commission Decision 2005/50/EC (the "Decision") on the harmonisation of the 24 GHz radio spectrum band for the time-limited use by automotive short-range radar equipment in the Community (OJ No L 21, 25.1.05, p. 15).

Regulation 2 makes amendments to update references from the Wireless Telegraphy Act 1949 (c. 54) to the Wireless Telegraphy Act 2006 (c. 36). Regulation 2 also amends regulation 4(7) of the principal Regulations so that the time-limited exemption for equipment capable of manual deactivation provided for in Article 6(3) of the Decision applies only to equipment (or replacing such equipment) established or installed in vehicles put into service in the Community before [date].

A full regulatory impact assessment and report of the effect that these Regulations will have on the costs to business is available from the OFCOM Library at Riverside House, 2a Southwark Bridge Road, London SE1 9HA (tel: 020 7981 3000) or on the OFCOM internet web site at www.ofcom.org.uk. Copies of the report have also been placed in the libraries of both Houses of Parliament.

Annex 3

24 GHz exclusion zones around UK radio astronomy sites

A3.1 The exclusion zone radius for each UK radio telescope has been calculated on the basis of the following criteria:-

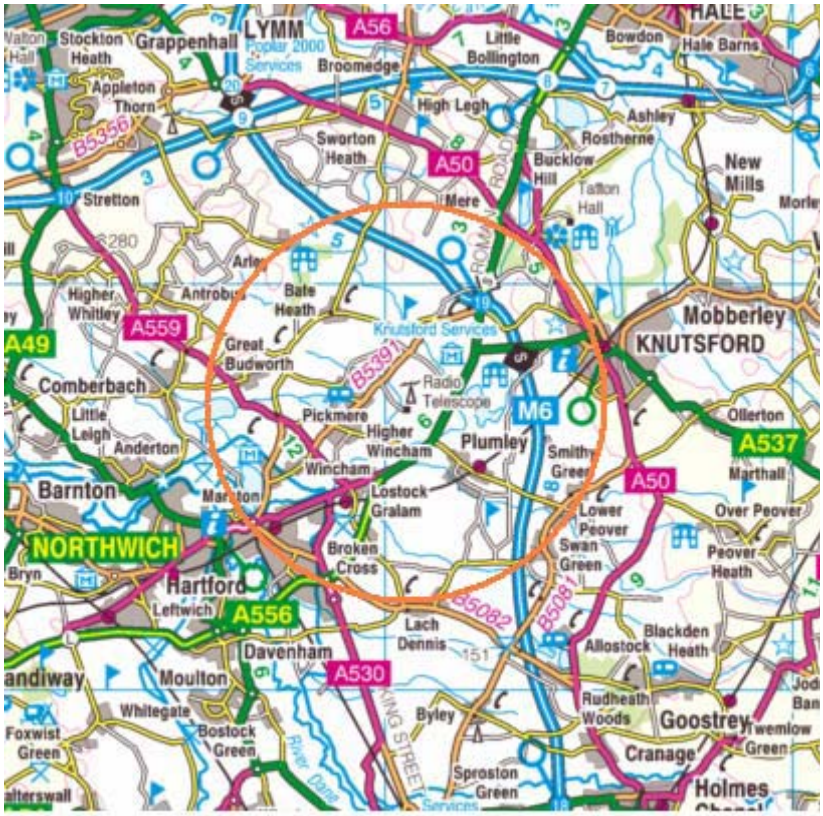
- An ITU-R Recommendation RA.769 radio astronomy protection level of -215 dBW/(m_2.Hz) for single dish spectral line observations and a protection level of -208 dBW/(m_2.Hz) for continuum measurements made on radio telescopes operating in the MERLIN network.
- Standard radio telescope antenna gain of 0dBi (RA.769)
- Propagation model P452
- Additional local loss increasing with distance @ 1dB per km
- UWB e.i.r.p -41.3dBm/MHz (-71.3dBW/MHz)
- Maximum density of 24 GHz devices of 1 per square km

A3.2 Five of the six major UK radio telescopes perform observations around 24 GHz and can be divided into two categories; The most sensitive measurements are undertaken with single dish radio telescopes at Jodrell Bank and Cambridge, while measurements at Knockin, Pickmere and Darnhall are undertaken with the radio telescopes linked in the more resilient MERLIN array of networked sites. After considering all these factors the exclusion radii have been determined to be 9 km for sites used for single dish measurements and 5 km at the networked sites.

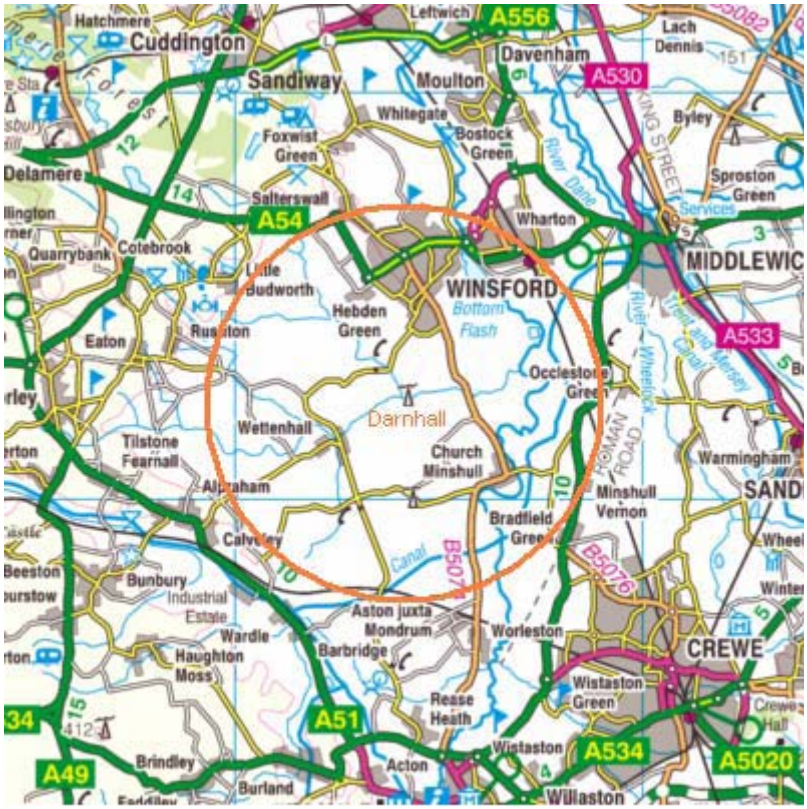
OBSERVATORY	LOCATION		EXCLUSION ZONE RADIUS (km)
Jodrell Bank	02° 18'26" W	53° 14'10" N	9
Cambridge	00° 02'20" E	52° 09'59" N	9
Darnhall	02° 32'03" W	53° 09'22" N	5
Pickmere	02° 26'38" W	53° 17'18" N	5
Knockin	02° 59'45" W	52° 47'24" N	5

A3.3 For illustrative purposes only these zones are shown on the following maps.

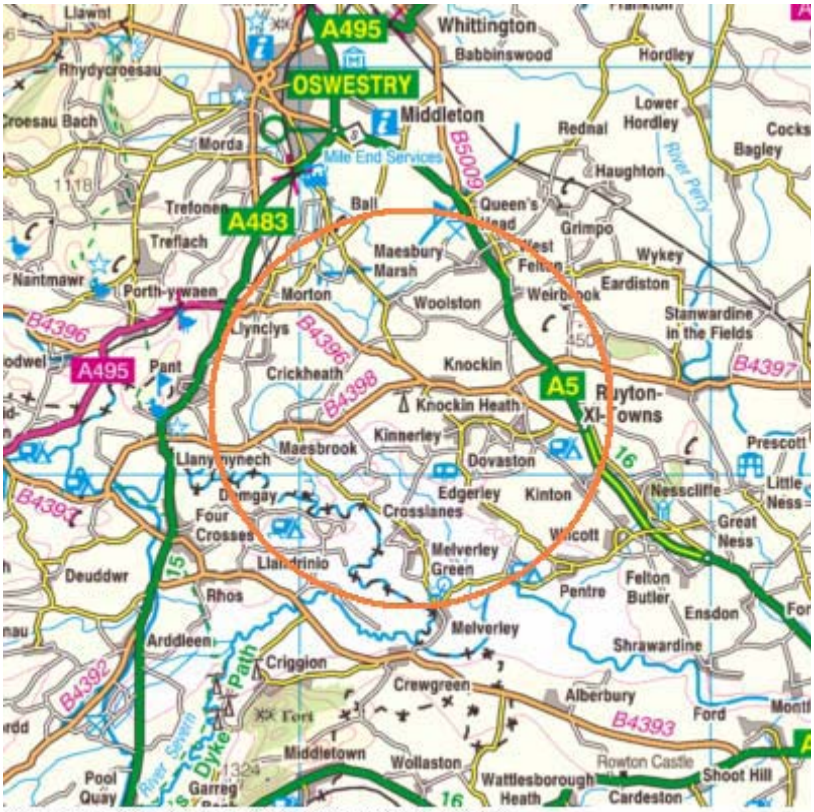
Map 1 - Pickmere



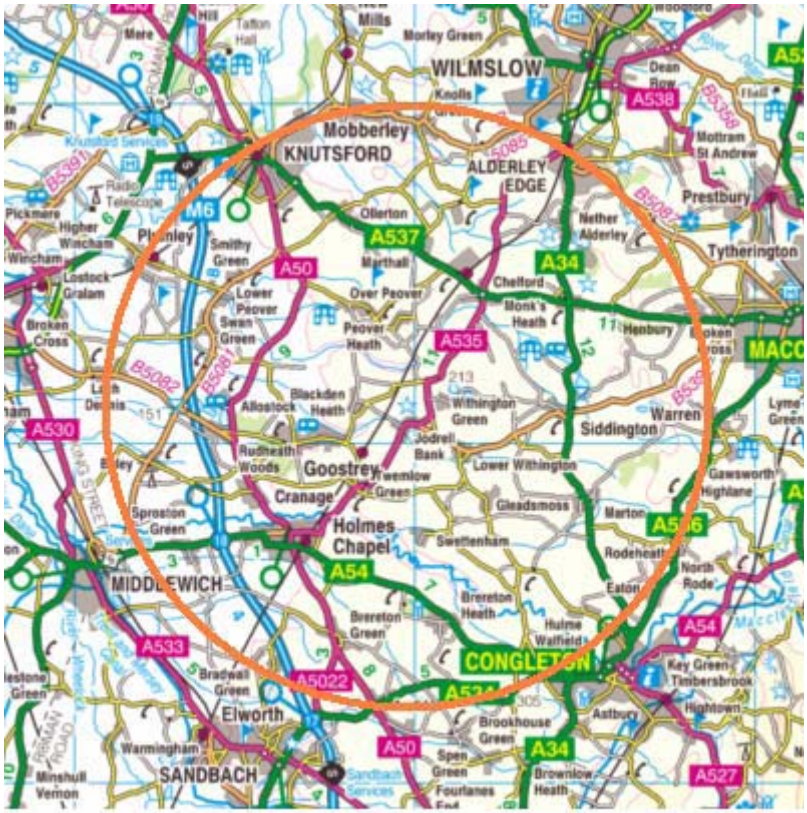
Map 2 – Darnhall



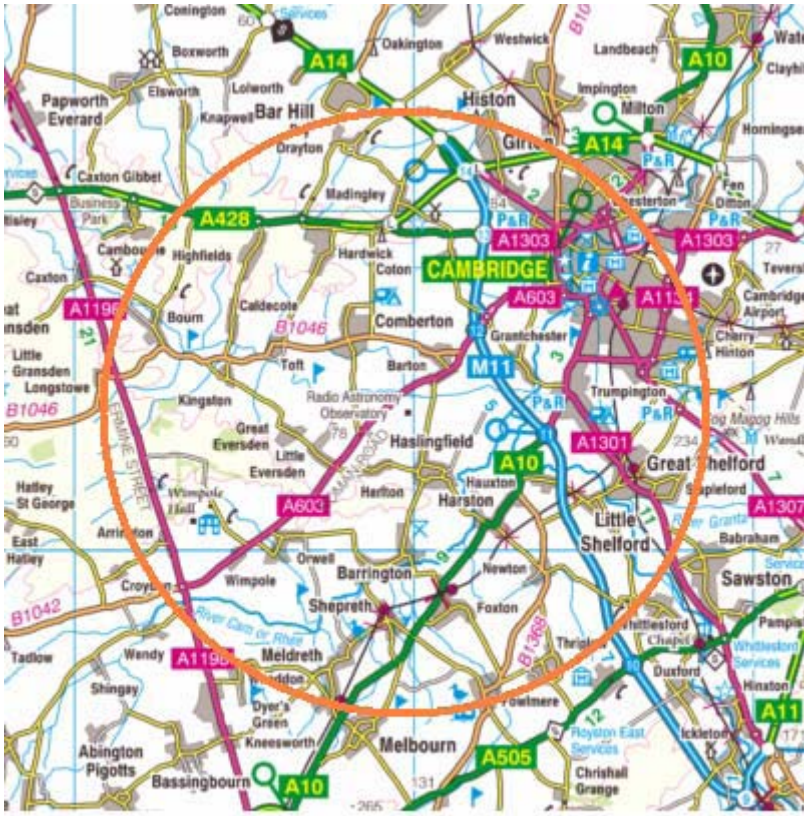
Map 3 – Knockin



Map 4 – Jodrell Bank



Map 5 – Cambridge



Annex 4

Commission Decision

25.1.2005 EN Official Journal of the European Union L 2

COMMISSION

COMMISSION DECISION

of 17 January 2005

on the harmonisation of the 24 GHz range radio spectrum band for the time-limited use by automotive short-range radar equipment in the Community

(notified under document number C(2005) 34)

(Text with EEA relevance)

(2005/50/EC)

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Community,

Having regard to Decision No 676/2002/EC of the European Parliament and of the Council of 7 March 2002 on a regulatory framework for radio spectrum policy in the European Community (Radio Spectrum Decision) [1], and in particular Article 4(3) thereof,

Whereas:

(1) The Commission communication to the Council and the European Parliament of 2 June 2003 on 'European Road Safety Action Programme — Halving the number of road accident victims in the European Union by 2010: a shared responsibility' [2] sets out a coherent approach to road safety in the European Union. Furthermore, in its communication to the Council and the European Parliament of 15 September 2003, entitled 'Information and communications technologies for safe and intelligent vehicles' [3], the Commission announced its intention to improve road safety in Europe, to be known as the *eSafety* initiative, by using new information and communications technologies and intelligent road safety systems, such as automotive short-range radar equipment. On 5 December 2003 in its conclusions on road safety [4] the Council also called for the improvement of vehicle safety by the promotion of new technologies such as electronic safety.

(2) The rapid and coordinated development and deployr of automotive short-range radar within the Commu require a harmonised radio frequency band to available for this application in the Community witl delay and on a stable basis, in order to provide necessary confidence for industry to make necessary investments.

(3) On 5 August 2003, with a view to such harmonisa the Commission issued a mandate, pursuant to Ar 4(2) of Decision No 676/2002/EC, to the Euro Conference of Postal and Telecommunications Adm trations (CEPT), to harmonise the radio spectrum an facilitate a coordinated introduction of automotive sl range radar.

(4) As a result of that mandate, the 79 GHz range band been identified by CEPT as the most suitable band long term development and deployment of automo short-range radar, with the introduction of this mea by January 2005 at the latest. The Commission there adopted Decision 2004/545/EC of 8 July 2004 on harmonisation of the radio spectrum in the 79 range for the use of automotive short-range r equipment in the Community [5].

(5) However, automotive short-range radar technology ir 79 GHz range band is still under development and is immediately available on a cost-effective basis, altho it is understood that the industry will promote the d opment of such a technology in order to mak available at the earliest possible date.

[1] OJ L 108, 24.4.2002, p. 1.
[2] COM(2003) 311.
[3] COM(2003) 542.
[4] Conclusions of the Council of the European Union on road safety, 15058/03 TRANS 307.
[5] OJ L 241, 13.7.2004, p. 66.

(6) In its report of 9 July 2004 to the European Commission under the mandate of 5 August 2003, CEPT identified the 24 GHz range radio spectrum band as being a temporary solution which would enable the early introduction of automotive short-range radar in the Community to meet the objectives of the *e-Safety* initiative, since technology is considered sufficiently mature for operation in that band. Therefore, Member States should take the appropriate measures based on their particular national radio spectrum situation to make sufficient radio spectrum available on a harmonised basis in the 24 GHz range radio spectrum band (21,65 to 26,65 GHz), while protecting existing services operating in that band from harmful interference.

(7) According to footnote 5.340 of the Radio Regulations of the ITU, all emissions are prohibited in the band 23,6 to 24,0 GHz, in order to protect the use on a primary basis of this band by the radio astronomy, earth exploration satellite and space research passive services. This prohibition is justified by the fact that harmful interference to these services by emissions in the band cannot be tolerated.

(8) Footnote 5.340 is subject to national implementation and may be applied in conjunction with Article 4.4 of the Radio Regulations, pursuant to which no frequency may be assigned to a station in derogation of the Radio Regulations, except on the express condition that such a station, when using such a frequency assignment, shall not cause harmful interference to a station operating in accordance with the provision of the ITU rules. Therefore, in its report to the Commission, CEPT pointed out that footnote 5.340 does not strictly prevent administrations from using bands falling under the footnote, provided that they are neither impacting services of other administrations nor trying to have international recognition under the ITU of such use.

(9) The 23,6 to 24,0 GHz frequency band is of primary interest for the scientific and meteorological communities to measure water vapour content essential for temperature measurements for the earth exploration satellite service. In particular, this frequency plays an important role in the Global Monitoring for Environment and Security initiative (GMES) aiming at an operational European warning system. The 22,21 to 24,00 GHz frequency range is also needed to measure spectral lines of ammonia and water as well as continuum observations for the radio astronomy service.

(10) The bands 21,2 to 23,6 GHz and 24,5 to 26,5 GHz are allocated to the fixed service on a primary basis in the ITU Radio Regulations and are extensively used by fixed links to meet the infrastructure requirement for existing 2G and 3G mobile networks and to develop broadband fixed wireless networks.

(11) Based on studies of compatibility between automotive short-range radar and fixed services, earth exploration satellite services and radio astronomy services, CEPT has concluded that an unlimited deployment of automotive short-range radar systems in the 24 GHz range radio spectrum band will create unacceptable harmful interference to existing radio applications operating in this band. Considering ITU Radio Regulations and the importance of these services, any introduction of automotive short-range radar at 24 GHz could be made only on condition that these services in the band are sufficiently protected. In this respect, while the signal emanating from automotive short-range radar equipment is extremely low in most of the 24 GHz frequency range, it is important to take into account the cumulative effect of the use of many devices, which individually might not cause harmful interference.

(12) According to CEPT, existing applications operating in or around the 24 GHz band would increasingly suffer significant levels of harmful interference if a certain level of penetration of vehicles using the 24 GHz range radio spectrum band for automotive short-range radars were to be exceeded. CEPT concluded in particular that sharing between earth exploration satellite services and automotive short-range radar could only be feasible on a temporary basis if the percentage of vehicles equipped with 24 GHz automotive short-range radar was limited to 7,0 % in each national market. While this percentage has been calculated on the basis of earth exploration satellite pixels, national markets are used as the reference against which to calculate the threshold, as this represents the most effective means of carrying out this monitoring.

(13) Furthermore, the CEPT report concluded that to maintain the protection requirements of the fixed service, sharing with automotive short-range radar could only be feasible on a temporary basis if the percentage of vehicles equipped with automotive short-range radar within sight of a fixed service receiver was limited to less than 10 %.

(14) It is therefore presumed on the basis of the work carried out by CEPT that harmful interference should not be caused to other users of the band where the total number of vehicles registered, placed on the market or put into service equipped with 24 GHz automotive short-range radar does not exceed the level of 7 % of the total number of vehicles in circulation in each Member State.

(15) It is not presently anticipated that this threshold will be reached before the reference date of 30 June 2013.

(16) Several Member States also use the 24 GHz range radio spectrum band for radar speed meter control which contributes to traffic safety. Following compatibility studies with automotive short-range radar of a number of these devices operating in Europe, CEPT has concluded that compatibility is possible under certain conditions, principally by decoupling the centre frequencies of the two systems by at least 25 MHz, and that the risk of harmful interference is low and will not create false speed measurements. Manufacturers of vehicles using automotive short-range radar systems have also committed themselves to continue taking appropriate steps to ensure that the risk of interference to radar speed meters is minimal. The reliability of radar speed meter equipment will therefore not be affected by the operation of automotive short-range radar to any significant extent.

(17) Some Member States will in the future use the band 21,4 to 22,0 GHz for broadcast satellite services in the direction space-to-earth. Following compatibility studies, relevant national administrations have concluded that no compatibility problems exist if the emissions of automotive short-range radar are limited to no more than −61,3 dBm/MHz for frequencies below 22 GHz.

(18) The above presumptions and precautions need to be kept under ongoing objective and proportionate review by the Commission assisted by the Member States, in order to assess on the basis of concrete evidence whether the threshold of 7 % will be breached in any national market before the reference date, whether harmful interference has been or is likely to be caused within a short period of time to other users of the band by the breach of the threshold of 7 % in any national market, or whether harmful interference has been caused to other users of the band even below the threshold.

(19) Therefore, as a result of information that becomes available as part of the review process, modifications to the present Decision may turn out to be necessary, in particular to ensure that there is no harmful interference caused to other users of the band.

(20) Accordingly, there can be no expectation that the band of 24 GHz will continue to be available for automotive short-range radar until the reference date, if any of the abovementioned presumptions prove not to be valid at any time.

(21) In order to facilitate and render more effective the monitoring of the use of the 24 GHz band and the review process, Member States may decide to draw more directly upon manufacturers and importers for information required in relation to the review process.

(22) As reported by CEPT, sharing between automotive short-range radar and the radio astronomy service within the 22,21 to 24,00 GHz band could lead to harmful interference for the latter if short-range radar-equipped vehicles were allowed to operate unhindered within a certain distance from each radio astronomy station. Therefore, and bearing in mind that Directive 1999/5/EC of the European Parliament and of the Council of 9 March 1999 on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity [1] requires that radio equipment must be constructed so as to avoid harmful interference, automotive short-range radar systems operating in bands used by radio astronomy in the 22,21 to 24,00 GHz range should be deactivated when moving within these areas. The relevant radio astronomy stations and their associated exclusion zones should be defined and justified by national administrations.

(23) In order to be effective and reliable, such deactivation is best done automatically. However, to allow an early implementation of automotive short-range radar in 24 GHz, a limited amount of transmitters with manual deactivation can be allowed as, with such a limited deployment, the probability of causing harmful interference to the radio astronomy service is expected to remain low.

(24) The temporary introduction of automotive short-range radar in the 24 GHz range radio spectrum band has an exceptional character and must not be considered as a precedent for the possible introduction of other applications in the bands where ITU Radio Regulations footnote 5.340 applies, be it for temporary or permanent use. Moreover, automotive short-range radar must not be considered as a safety-of-life service within the meaning of the ITU Radio Regulations and must operate on a non-interference and non-protected basis. Furthermore, automotive short-range radar should not constrain the future development in the use of the 24 GHz band of applications which are protected by footnote 5.340.

(25) The placing on the market and operation of 24 GHz automotive short-range radar equipment in a stand-alone mode or retrofitted in vehicles already on the market would not be compatible with the objective of avoiding harmful interference to existing radio applications operating in this band, since it could lead to an uncontrolled proliferation of such equipment. In contrast, it should be easier to control the use of automotive short-range radar systems in the 24 GHz band solely as part of a complex integration of the electrical harness, automotive design and software package of a vehicle and originally installed in the new vehicle, or as replacement of original vehicle-mounted automotive short-range radar equipment.

[1] OJ L 91, 7.4.1999, p. 10. Directive as last amended by Regulation (EC) No 1882/2003 (OJ L 284, 31.10.2003, p. 1).

(26) This Decision will apply taking into account and without prejudice to Council Directive 70/156/EEC of 6 February 1970 on the approximation of the laws of the Member States relating to the type-approval of motor vehicles and their trailers [1] and to Directive 1999/5/EC.

(27) The measures provided for in this Decision are in accordance with the opinion of the Radio Spectrum Committee,

HAS ADOPTED THIS DECISION:

Article 1

The purpose of this Decision is to harmonise the conditions for the availability and efficient use of the 24 GHz range radio spectrum band for automotive short-range radar equipment.

Article 2

For the purposes of this Decision, the following definitions shall apply:

1. '24 GHz range radio spectrum band' means the 24,15 +/– 2,50 GHz frequency band;

2. 'automotive short-range radar equipment' means equipment providing road vehicle-based radar functions for collision mitigation and traffic safety applications;

3. 'automotive short-range radar equipment put into service in the Community' means automotive short-range radar equipment originally installed or replacing one so installed in a vehicle which will be or which has been registered, placed on the market or put into service in the Community;

4. 'on non-interference and non-protected basis' means that no harmful interference may be caused to other users of the band and that no claim may be made for protection from harmful interference received from other systems or services operating in that band;

5. 'reference date' means 30 June 2013;

6. 'transition date' means 30 June 2007;

7. 'vehicle' means any vehicle as defined by Article 2 of Directive 70/156/EEC;

8. 'deactivation' means the termination of emissions by automotive short-range radar equipment;

9. 'exclusion zone' means the area around a radio astronomy station defined by a radius equivalent to a specific distance from the station;

10. 'duty cycle' means the ratio of time during any one-hour period when equipment is actively transmitting.

Article 3

The 24 GHz range radio spectrum band shall be designated and made available as soon as possible and no later than 1 July 2005, on a non-interference and non-protected basis, for automotive short-range radar equipment put into service in the Community which complies with the conditions laid down in Articles 4 and 6.

The 24 GHz range radio spectrum band shall remain so available until the reference date, subject to the provisions of Article 5.

After that date, the 24 GHz range radio spectrum band shall cease to be available for automotive short-range radar equipment mounted on any vehicle except where that equipment was originally installed, or is replacing equipment so installed, in a vehicle registered, placed on the market or put into service before that date in the Community.

Article 4

The 24 GHz range radio spectrum band shall be available for the ultra-wide band part of automotive short-range radar equipment with a maximum mean power density of – 41,3 dBm/MHz effective isotropic radiated power (e.i.r.p.) and peak power density of 0 dBm/50MHz e.i.r.p., except for frequencies below 22 GHz, where the maximum mean power density shall be limited to -61,3 dBm/MHz e.i.r.p.

The 24,05 to 24,25 GHz radio spectrum band is designated for the narrow-band emission mode/component, which may consist of an unmodulated carrier, with a maximum peak power of 20 dBm e.i.r.p. and a duty cycle limited to 10 % for peak emissions higher than – 10 dBm e.i.r.p.

Emissions within the 23,6-24,0 GHz band that appear 30° or greater above the horizontal plane shall be attenuated by at least 25 dB for automotive short-range radar equipment placed on the market before 2010 and thereafter by at least 30 dB.

Article 5

1. The continued availability of the 24 GHz range radio spectrum band for automotive short-range radar applications shall be kept under active scrutiny to ensure that the main premise of opening this band to such systems remains valid, which is that no harmful interference is caused to other users of the band, in particular through the timely verification of:

[1] OJ L 42, 23.2.1970, p. 1. Directive as last amended by Commission Directive 2004/104/EC (OJ L 337, 13.11.2004, p. 13).

(a) the total number of vehicles registered, placed on the market or put into service equipped with 24 GHz automotive short-range radar in each Member State, to verify that this number does not exceed the level of 7 % of the total number of vehicles in circulation in each Member State;

(b) whether adequate information has been made available by Member States or by manufacturers and importers regarding the number of 24 GHz short-range radar-equipped vehicles for the purpose of monitoring effectively the use of the 24 GHz band by automotive short-range radar equipment;

(c) whether the individual or cumulative use of 24 GHz automotive short-range radar is causing or is likely to cause within a short period of time harmful interference to other users in the 24 GHz band or in adjacent bands in at least one Member State, whether or not the threshold referred to in (a) has been reached;

(d) the continuing appropriateness of the reference date.

2. In addition to the review process in paragraph 1, a fundamental review shall be carried out by 31 December 2009 at the latest to verify the continuing relevance of the initial assumptions concerning the operation of automotive short-range radar in the 24 GHz range radio spectrum band, as well as to verify whether the development of automotive short-range radar technology in the 79 GHz range is progressing in such a way as to ensure that automotive short-range radar applications operating in this radio spectrum band will be readily available by 1 July 2013.

3. The fundamental review may be triggered by a reasoned request by a member of the Radio Spectrum Committee, or at the Commission's own initiative.

4. The Member States shall assist the Commission to carry out the reviews referred to in paragraphs 1 and 2 by ensuring that the necessary information is collected and provided to the Commission in a timely manner, in particular the information set out in the Annex.

Article 6

1. Automotive short-range radar equipment mounted on vehicles shall only operate when the vehicle is active.

2. Automotive short-range radar equipment put into service in the Community shall ensure protection of the radio astronomy stations operating in the radio spectrum band 22,21 to 24,00 GHz defined in Article 7 through automatic deactivation in a defined exclusion zone or via another method providing equivalent protection for these stations without driver intervention.

3. By way of derogation to paragraph 2, manual deactivation will be accepted for automotive short-range radar equipment put into service in the Community operating in the 24 GHz range radio spectrum band before the transition date.

Article 7

Each Member State shall determine the relevant national radio astronomy stations to be protected pursuant to Article 6(2) in its territory and the characteristics of the exclusion zones pertaining to each station. This information, supported by appropriate justification, shall be notified to the Commission within six months of adoption of this Decision, and published in the *Official Journal of the European Union*.

Article 8

This Decision is addressed to the Member States.

Done at Brussels, 17 January 2005.

For the Commission
Viviane REDING
Member of the Commission

ANNEX

Information required for monitoring the use of the 24 GHz range radio spectrum band by automotive short-range radar

This Annex establishes the data required to verify the penetration rate of automotive vehicles equipped with short-range radar in each Member State of the European Union in accordance with Article 5. This data shall be used to calculate the proportion of vehicles equipped with short-range radar using the 24 GHz range radio spectrum compared to the total number of vehicles in circulation in each Member State.

The following data shall be collected on a yearly basis:

(1) the number of vehicles equipped with short-range radar using the 24 GHz range radio spectrum band produced and/or placed on the market and/or registered for the first time during the reference year in the Community;

(2) the number of vehicles equipped with short-range radar using the 24 GHz range radio spectrum band imported from outside the Community during the reference year;

(3) the total number of vehicles in circulation during the reference year.

All data shall be accompanied by an evaluation of the uncertainty related to the information.

In addition to the above data, any other relevant information which would assist the Commission in maintaining an adequate overview on the continued use of the 24 GHz range radio spectrum band by automotive short-range radar devices shall be made available in a timely fashion, including information on:

— current and future market trends, both within and outside the Community,

— after-market sales and retrofitting of equipment,

— the state of progress of alternative technologies and applications, notably automotive short-range radar operating in the 79 GHz range radio spectrum band according to Decision 2004/545/EC.

Annex 5

Responding to this consultation

How to respond

A5.1 We invite written views and comments on the issues raised in this document, to be made **by 5pm on 17 December 2007**.

A5.2 We strongly prefer to receive responses using the online web form at http://www.ofcom.org.uk/consult/condocs/srr/howtorespond/form, as this helps us to process the responses quickly and efficiently. We would also be grateful if you could assist us by completing a response (see Annex 7), to indicate whether or not there are confidentiality issues. This response coversheet is incorporated into the online web form questionnaire.

A5.3 For larger consultation responses - particularly those with supporting charts, tables or other data - please email paul.chapman@ofcom.org.uk attaching your response in Microsoft Word format, together with a consultation response coversheet.

A5.4 Responses may alternatively be posted or faxed to the address below, marked with the title of the consultation.

Paul Chapman
Ofcom
Riverside House
2a Southwark Bridge Road
London SE1 9HA

Fax: 020 7981 3921

A5.5 Note that we do not need a hard copy in addition to an electronic version. We will acknowledge receipt of responses if they are submitted using the online web form but not otherwise.

A5.6 You can register to receive free mail updates alerting you to the publications of relevant Ofcom documents. For more details please see: http://www.ofcom.org.uk/static/subscribe/select_list.htm

Further information

A5.7 If you want to discuss the issues and questions raised in this consultation, or need advice on the appropriate form of response, please contact Paul Chapman on 020 7981 3069.

Confidentiality

A5.8 We believe it is important for everyone interested in an issue to see the views expressed by consultation respondents. We will therefore usually publish all responses on our website, www.ofcom.org.uk, ideally on receipt (when respondents confirm on their response coversheet that this is acceptable).

A5.9 All comments will be treated as non-confidential unless respondents specify that part or all of the response is confidential and should not be disclosed. Please place

any confidential parts of a response in a separate annex so that non-confidential parts may be published along with the respondent's identity.

A5.10 We reserve our power to disclose any information we receive where this is required to facilitate the carrying out of our statutory functions.

A5.11 Please also note that copyright and all other intellectual property in responses will be assumed to be licensed to us to use in order to meet its legal requirements. Our approach on intellectual property rights is explained further on our website at http://www.ofcom.org.uk/about/accoun/disclaimer/

Our consultation processes

A5.12 We seek to ensure that responding to a consultation is as easy as possible. For more information please see our consultation principles in Annex 6.

A5.13 If you have any comments or suggestions on how we conduct our consultations, please call our consultation helpdesk on 020 7981 3003 or e-mail us at consult@ofcom.org.uk . We would particularly welcome thoughts on how we could more effectively seek the views of those groups or individuals, such as small businesses or particular types of residential consumers, who are less likely to give their opinions through a formal consultation.

A5.14 If you would like to discuss these issues or our consultation processes more generally you can alternatively contact Vicki Nash, Director Scotland, who is our consultation champion:

Vicki Nash
Ofcom
Sutherland House
149 St. Vincent Street
Glasgow G2 5NW

Tel: 0141 229 7401
Fax: 0141 229 7433

Email vicki.nash@ofcom.org.uk

Annex 6

Our consultation principles

A6.1 We have published the following seven principles that we will follow for each public written consultation.

We will seek to engage stakeholders before the consultation

A6.2 Where possible, we will hold informal talks with people and organisations before announcing a big consultation to find out whether we are thinking in the right direction. If we do not have enough time to do this, we will hold an open meeting to explain our proposals shortly after announcing the consultation.

We will be open and transparent during the consultation

A6.3 We will be clear about whom we are consulting, why, on what questions and for how long.

A6.4 We will make the consultation document as short and simple as possible, with a summary of no more than two pages. We will try to make it as easy as possible to give us a written response. If the consultation is complicated, we may provide a shortened version for smaller organisations or individuals who would otherwise not be able to spare the time to share their views.

A6.5 We will normally allow 10 weeks for responses to consultations on issues of general interest.

A6.6 There will be a person within Ofcom who will be in charge of making sure that we follow our own guidelines and reach out to the largest number of people and organisations interested in the outcome of our decisions. This individual (whom we call the consultation champion) will also be the main person to contact with views on the way that we run our consultations.

A6.7 If we are not able to follow one of these principles, we will explain why. This may be because a particular issue is urgent. If we need to reduce the amount of time we have set aside for a consultation, we will let those concerned know beforehand that this is a “red-flag consultation” that needs their urgent attention.

Our decisions will take full account of responses

A6.8 We will look at each response carefully and with an open mind. We will give reasons for our decisions and an account of how the views of those concerned helped shape those decisions.

Annex 7

Consultation-response cover sheet

A7.1 In the interests of transparency and good regulatory practice, we will publish all consultation responses in full at www.ofcom.org.uk.

A7.2 We have produced a cover sheet for responses (see below) and would be very grateful if you could send one with your response. (It is incorporated into the online web form if you respond in this way.) This will speed up our processing of responses and help to maintain confidentiality where appropriate.

A7.3 The quality of consultation can be enhanced by publishing responses before the consultation period closes. In particular, this can help those individuals and organisations with limited resources or familiarity with the issues to respond in a more informed way. Therefore, we would encourage respondents to complete their cover sheet in a way that allows us to publish their responses upon receipt rather than wait until the consultation period has ended.

A7.4 We strongly prefer to receive responses via the online web form. If you are responding via email, post or fax, you can download an electronic copy of this cover sheet in Word or RTF format from www.ofcom.org.uk/consult/244504/.

A7.5 Please put in a separate annex any parts of your response that you consider should be kept confidential and include your reasons why this part of your response should not be published. This can include information such as your personal background and experience. If you want your name, address, other contact details or job title to remain confidential, please provide them in your cover sheet only so that we don't have to edit your response.

Cover sheet for response to an Ofcom consultation

BASIC DETAILS

Consultation title:

To (Ofcom contact):

Name of respondent:

Representing (self or organisation/s):

Address (if not received by email):

CONFIDENTIALITY

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

Nothing	☐	Name/contact details/job title	☐
Whole response	☐	Organisation	☐
Part of the response	☐	If there is no separate annex, which parts?	

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

DECLARATION

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

Ofcom seeks to publish responses on receipt. If your response is not confidential (in whole or in part) and you would prefer us to publish your response only once the consultation has ended, please tick here. ☐

Name Signed (if hard copy)