

**Rod Johnson**  
**Bay 2/21**  
**Spring Place**  
**105 Commercial Road**  
**Southampton**  
**SO15 1EG**  
**United Kingdom**

Mr Michael Richardson  
Ofcom  
Riverside House  
2A Southwark Bridge Road  
London  
SE1 9HA

Tel: +44 (0)23 8032 9100  
Fax: +44 (0)23 8032 9371  
E-mail: [rod.johnson@mcga.gov.uk](mailto:rod.johnson@mcga.gov.uk)

Your ref:  
Our ref:

29 October 2008

Dear Mr Richardson

**Consultation Response to Applying Spectrum Pricing to the Maritime and Aeronautical Sectors.**

1. The Maritime and Coastguard Agency, through this letter, welcomes the opportunity to comment on the proposals put forward in the Ofcom consultation document, "Applying spectrum pricing to the maritime and aeronautical sectors", published on 30 July 2008. The MCA fully recognises that there may be scope for improving the efficiency of use of spectrum in the maritime band and is committed to achieving such efficiencies. As MCA is an Executive Agency of the Department for Transport, these comments need to be seen as an adjunct, dealing specifically with maritime issues, to the DfT response to the consultation. Annexed to this letter are detailed answers to the questions posed in the consultation document.

2. Very late in the consultation process we understand that there is a new proposal by Ofcom whereby the RNLI will receive a "volume" discount to their potential AIP charges in recognition of the valuable safety of life functions they perform. Until we have seen further detail of this proposal and how it is to be implemented we cannot comment further. However we wish to make clear that other organisations, such as the MCA, contribute safety of life and other services and we believe that recognition of this should be included if departures from the original proposal are made. We also believe that these organisations need to be fully consulted during the development of any new proposals.

3. The safe use of navigable waters is managed by international and regional safety regimes, and by national statute, national codes, and voluntary good practice. The waters around the United Kingdom are used for military purposes, commercial shipping, oil and gas recovery, renewable energy installations, mineral extraction, fishing, and sport leisure and recreational use. The safety regime in these waters is structured to take account of these uses and involves regulating the carriage and use of shipborne transmitting and receiving equipments, the provision of electronic aids to navigation, vessel traffic management services, port control operations, and



enabling an exchange between ship and shore of maritime safety information. Ships from all over the world arrive in UK ports, and UK vessels trade worldwide. Worldwide interoperability of the safety system is essential.

4. Lapses of safety in the maritime environment often have three consequences: injury to people, damage to the marine environment, and economic loss - to ships, equipment and cargo, and third party economic loss to those people and organisations whose normal activity is affected by the accident. Ships now carry up to 6,000 people, or £1.5bn of cargo in the case of a large container ship. Just-in-time supply chains mean that shipping delays cause shortages of food, energy, raw materials and manufactured goods. Pressures on the maritime space (for shipping, fishing, leisure, aggregates, oil and gas, and renewable energy) mean that safety management is increasing in importance, with consequent implications for the use of radio communications and radar.

5. The radio spectrum in use for maritime safety is regulated internationally by the International Telecommunication Union (ITU) in close co-ordination with the IMO, the International Maritime Organisation. The latter develops treaties and other agreements covering most aspects of ship construction, operation and equipment including VHF radio and radar. When ratified by the 160 contracting governments making up the membership of IMO, these treaties can bind the UK in international law. Development of treaties and progress is consensual and can be protracted. Normally, long lead times are allowed for the introduction of new equipment with consequent replacement or updating of existing equipment. In addition to these, the International Electrotechnical Commission (IEC) provides the technical standards for much of the maritime equipment used in safety and navigation systems. In Europe the Community and the Commission develop in some cases additional requirements through Directives and Regulations. In summary there are a number of external influences which affect the UK's ability to change existing arrangements.

6. The MCA has two areas of interest involving spectrum usage which are relevant to this OFCOM consultation. The first is the outward facing responsibility for maritime safety in UK waters including the safe operation of ships, how they interface safely with each other, and with land based systems. The second concerns the operations of the Agency itself in providing vessel traffic services (VTS), the provision of maritime safety information, aids to navigation and also search and rescue and counter-pollution arrangements. These derive from international, regional and national obligations for intervention, enforcement and emergency response in UK waters and in some adjacent sea areas. Vessel traffic services are also operated by private organisations in ports and harbours, and by organisations on behalf of the MCA for example in the Bristol Channel,

7. Visiting vessels pay, in part, for the services provided by private organisations through port and light dues, however, the provision of MCA services is centrally funded. Indications are that the current AIP proposals will have a significant effect on operating costs of providing these which in turn will focus attention as to whether there is scope for reduction or possibly withdrawal of services by the operators affected. The MCA will not reduce services which are essential for safety. It could, however, be perceived by the maritime sector, including recreational users and the wider public, that withdrawal of any service could have a detrimental effect on safety,

which the MCA may find difficult to counter. Possible resulting adverse economic impacts cannot be excluded, for instance in reduced or slower traffic flows.

8. An outline of MCA's obligations will be helpful in understanding the potential impact of AIP on relevant operations. The MCA operates under remit from the Secretary of State for Transport and has its objectives and broad direction and limitations described in the Agency Framework Document. Power to undertake various activities such as provision of navigational information, maritime security, search and rescue, counter-pollution, and salvage, is conferred by UK law. International obligations on the UK to provide these stem from a number of international conventions for example the SAR (Search and Rescue) Convention SOLAS (Safety of Life at Sea Convention), In relation to some of these obligations, the MCA is a category 1 responder under the terms of the Civil Contingencies Act. It has corresponding national contingency and major incident plans in place, as well close operational ties with regional and local resilience forums.

9. MCA responsibilities for vessel traffic monitoring come from EU and UK regulation through the EU Vessel Traffic Monitoring Directive and the UK Merchant Shipping Vessel Traffic Monitoring and Reporting Regulations. These statutory functions require the operation of VHF radio and a VHF secondary surveillance system called the automatic identification system (AIS), and to an increasing extent, radar.

10. The increasing complexity of the sea space and the growing competition for its use has brought about wider use of VHF radio and radar to provide risk control options, to maintain and improve on the present level of maritime safety. The IMO work towards e-navigation, a safety concept which will be heavily dependent on ship-shore communications, is developing. The MCA considers it important that prohibitive costs are not seen as a deterrent to this initiative. It is not clear from the consultation document how the impact that AIP will have on these and other developing systems can be established. It is self evident that the need for such systems derive from growing threats to maritime safety and an increasing public expectation for higher levels of maritime safety, not least because of pollution risks.

11. With respect to the provision of the statutory service to co-ordinate maritime civil search and rescue, two of the MCA's key service providers are in the private and voluntary sectors. The SAR Helicopter service is contracted out and any increase in AIP costs associated with their operation would be reflected in the contract price paid by the taxpayer. The RNLI lifeboat operations, entirely funded by charitable donation, would have to meet AIP increases for radio and radar.

12. The MCA recognises that, in principle, AIP can contribute to ensuring the Government's aim of greater efficiency in public sector spectrum use. It is, however, concerned that the current proposals may not achieve these benefits in the maritime sector. Indicative costs based on the algorithms supplied in the consultation indicate that operating costs will rise significantly under AIP. But there is limited scope for users to change or modify their spectrum use because of the international nature of assignments in the marine band. There are also concerns that significant costs would lead to withdrawal of, or reductions in service, potentially with safety implications, which would have to be addressed. MCA is also concerned that high

charges could be an obstacle to future improvements, for example new navigation systems.

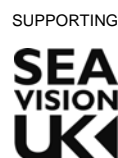
A copy of this letter, Annex and your covering sheet is being sent to you by email and by post. If you have any questions or wish to further discuss any aspects of these documents please let me know.

Yours sincerely

pp. R H Rees

**Rod Johnson**  
**Assistant Director Coastal Safety and Chief Coastguard**

Annex – list of questions



## MCA response to questions in the Ofcom consultation “Applying spectrum pricing to the maritime and aeronautical sectors”.

This response is offered in addition to that from the Department for Transport (DfT) and addresses maritime-specific issues with an emphasis on safety and technical content.

<p><b>Question 1:</b> How should Ofcom manage the process of taking advice from users, regulators and government on efficient apportionment of AIP fees in the maritime and aeronautical sectors? Are any new institutional arrangements needed?</p>	<p>Maritime stakeholders’ seminars (hosted by Ofcom) and the Maritime Radio Spectrum Users’ Group (hosted by MCA), both produce direct user feedback based upon considerable experience in the sector. Often this advice cannot be quantified and it cannot substitute for a full impact assessment. However, we would encourage Ofcom to take such experience into account in the consultation process and that it is recorded so that it can be amplified if necessary.</p> <p>We believe it is essential that stakeholders who have commented, in meetings or formally in the consultation process, can be assured that their comments have been fully taken into account and that their arguments have been accepted or rejected on the basis of convincing evidence.</p> <p>In general such existing arrangements for liaison between Ofcom, the MCA, other regulators and the government are considered adequate for satisfactory completion of the advisory process. However, improvements can be made to the liaison arrangements with the offshore industry, in particular the production sector.</p>
<p><b>Question 2:</b> If you consider that our proposals for pricing ground station users for any spectrum would be likely to have a detrimental impact on safety, please let us know. In order for us to understand your assessment fully, it would be helpful if you could outline the mechanisms whereby this might happen.</p>	<p>Safety in the maritime sector is not defined in absolute terms but in terms of risk assessments based on evidence. To the general public and to a lesser extent industry and seafarers, it is the perception of safety that is relevant and this needs to be reflected in the service that the MCA provides. The sole use of MCA ground stations is in pursuance of safety of life and safety of navigation in the UK Search and Rescue Region. Any dilution or reduction in service which can only be justified in cost or risk terms may be viewed as a reduction in safety unless it can also be practically justified. .</p> <p>The MCA provides extensive coastal VHF coverage in the territorial waters of the UK. {waters around the UK?} It also provides radar surveillance in critical areas both through its own installations and also</p>

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	<p>those managed by partners. Both serve to assist the effective movement of shipping and meet the UK’s international obligations in this area. Both, implicitly, are safety related. Early indications of the impact of pricing on VHF transmission indicate a significant increase in charges which are unlikely to be sustainable in the current economic climate without having an impact on these services. These charges cannot be passed on, since the services are free at point of use, necessarily. The UK’s credibility on maritime safety is likely to be undermined.</p> <p>Increased charges are likely to affect the future development of navigational aids, for example “e navigation” and Vessel Traffic Surveillance. Put simply, if the charges are too high this will be a disincentive to development unless mandated at international level – ie regulation rather than voluntary action would be needed. The inability to provide innovative solutions for navigation will also impact on manufacturers, with economic consequences, as well as reducing the UK’s standing on safety, and its influence at international fora.</p> <p>In line with HMG policy the MCA agrees with and fully accepts the principle of incentivisation both to make more effective use of existing spectrum and to reflect a more realistic pricing regime. Where users have no choice, however, this should be taken into account, as agreed in the Cave audit.</p>
<p><b>Question 3:</b> Do you have any evidence which indicates that AIP charged to ground stations could have a material detrimental impact on UK competitiveness?</p>	<p>From the MCA perspective as a provider of VHF and Radar services, as has been described in question 2, the increased charges will need to be absorbed by the MCA and as such are unlikely to have an impact on UK competitiveness. Unless additional funding is made available by the Treasury, other priorities might be affected.</p> <p>This assumes that current levels of service are maintained. HMG is</p>

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	<p>also required by international treaties to provide navigational marks/beacons and information. The former is undertaken by the three General Lighthouse Authorities on behalf of HMG. Current costs of maintaining these are passed on through “light dues” payable by vessels calling at UK ports. A study of the current economic effect that light dues, have on trade was commissioned by DfT in 2003 (Study of economic effect of Light dues - MDS Transmodal). This concluded that a reduction in dues would encourage growth of traffic through UK ports. It follows that if AIP costs significantly increase the burden to the GLAs and these effects are passed on through light dues, the reverse effect can be conjectured, with consequent effects to the viability of coastal and short sea shipping.</p>
<p><b>Question 4:</b> Taking into account the information available in this document, including that set out in Annex 5, our initial views on VHF radiocommunications licence fees and on the reference rates for bands in other uses, and any information you have about the organisations to whom we are proposing to charge fees, please provide any evidence that you think is relevant to us in considering the financial impact of the fees we intend to propose for VHF radiocommunications, or for other uses.</p>	<p>The information on future costs is not clear. In addition, MCA believes that opportunity costs should be zero rated on all channels used in the execution of search and rescue and counter pollution. This should also apply to intership VHF communications which are regulated internationally (including bandwidths mandated). As these assignments are internationally regulated, MCA considers that users cannot respond to market signals, and therefore applying AIP would have no effect on efficiency. It would be more effective to promote this through the relevant international body.</p> <p>MCA agrees with Ofcom that, the distress uses of Channels 16 and 70 should not be subject to AIP. It is also noted that Ofcom is not intending to re-impose charges for ships’ radio licences. This creates an imbalance in the pricing regime, offering no incentive for more efficient use of spectrum by ships.</p> <p>Because channels are internationally harmonised for use by ships and shore installations, much of the maritime spectrum will be effectively sterilised from being re-allocated in the UK because of its</p>

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	continued use by our neighbouring countries and vessels themselves.
<b>Question 5:</b> Do you agree that there is little to be gained, in terms of economic efficiency, from charging AIP to WT Act licences for aircraft?	No MCA comment.
<b>Question 6:</b> Do you consider that we should discount fees for any particular user or type of user? Specifically, do you consider that there should be a discount for charities whose object is the safety of human life in an emergency?	HMG, by its accession to the IMO SOLAS convention, is mandated to provide rescue services for persons at sea. There are a number of organisations which provide this service on a voluntary basis. and the MCA view is that the AIP proposals should not affect this capability and provision. The consequences of withdrawal or reduction in services through increased costs could lead to loss of life which would have been avoidable, and would weaken the UK commitment to its international obligations. unless an equivalent Government funded service were provided.
<b>Question 7:</b> Do you agree that Ofcom should apply AIP to ground stations' use of maritime and aeronautical VHF radiocommunications channels, to help manage growing congestion in current use and to ensure that the cost of denying access to this spectrum by potential alternative applications is faced by current users?	<p>EVIDENCE TO SUPPORT THE ASSERTION THAT ALTERNATIVE DEMAND IS INCREASING HAS NOT BEEN PROVIDED. THERE IS A LACK OF EVIDENCE THROUGHOUT THE CONSULTATION PAPER. WITHOUT MORE INFORMATION ABOUT 'GROWING CONGESTION' AND ITS NATURE, AND GIVEN THAT ASSIGNMENTS ARE INTERNATIONAL IN THE MARITIME VHF BAND, IT IS NOT EVIDENT HOW ALTERNATIVE DEMAND COULD BE CO-LOCATED AND MANAGED. THE FAILURE TO PROVIDE ANY INCENTIVE TO SHIPS, WHICH ACCOUNT FOR A LARGE PART OF THE EXISTING DEMAND, DOES NOT HELP.</p> <p>THE MCA AGREES WITH THE PRINCIPLE OF APPLYING AIP TO GROUND STATIONS, BUT WITHOUT FURTHER INFORMATION IS UNABLE SUPPORT THE PREMISE THAT THIS WILL LEAD TO EASING OF CONGESTION. THE MCA ALSO HAS CONSIDERABLE RESERVATIONS ON THE USE OF THE 50 KM GRID DEVELOPED AS</p>



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	PART OF THE VHF PRICING ALGORITHM. IT IS NOT APPROPRIATE FOR PORT AND COASTAL STATIONS. PORTS CANNOT USE ALTERNATIVE SERVICES BECAUSE OF INTERNATIONAL CONSTRAINTS, AND CLEARLY THEY CANNOT MOVE THEIR SERVICES ELSEWHERE. SO THERE IS NO EFFICIENCY INCENTIVE.
<b>Question 8:</b> Do you agree with our initial view that it would be appropriate to apply a pricing system similar to that already existing for Business Radio licences to maritime and aeronautical VHF communications? If not, what are your reasons for proposing that we should develop a fee structure for maritime and aeronautical VHF channels which is distinct from that already established for Business Radio?	<p>The principle of business radio pricing is that larger fees are charged in more spectrum congested areas as an incentive to move to less congested areas, or non-spectrum based communications. This fails to take account of the international nature of these maritime assignments. In many cases it is not possible for users to migrate without an effect on service. The MCA view is that business radio does not offer an appropriate pricing model, and we would propose that other options are considered. One possibility would be a charging regime based on a formula that would take into account channel occupancy.</p> <p>See also answers to questions 4 and 7.</p>
<b>Question 9:</b> Are there any short-term reasons specific to the sector(s) why it would be inappropriate to apply fees from April 2009?	The timescale is too short. As many organisations have already finalised budgets for FY2009-10, and the prospective increases are large in some cases, it would seem inappropriate to apply these changes from spring 2009. Also there is no realistic possibility of the UK being able to take any action that would result in spectrum efficiencies in the VHF communications band, where these may be possible internationally, within the proposed timeframe. Many businesses do not start their financial year in April and so the proposed date is already in the current financial year of some. It is suggested that least 18 months notice should be given of the commencement date for this major change.

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<p><b>Question 10:</b> Ofcom would welcome stakeholders' views on the factors which should be taken into account when apportioning fees between individual users of radars and racons.</p>	<p>This is immensely complex. The impact of ships' radars, the use of which is covered by the (nil-charge) ships' radio licence, will impact on the shore-based radars in an almost random manner. Of primary importance is a transparent process where it is evident to shore-based radar operators exactly how any fees are calculated and that the total collected equals the AIP. The development of pricing algorithms must reflect this. It is also important that potential efficiencies in spectrum usage and the additional costs these may incur are weighed against other priorities, such as the development of future navigation systems and other international developments. Without this integrated approach the UK plc is unlikely to reap overall benefit and UK shipping and ports industries may be disadvantaged.</p>
<p><b>Question 11:</b> Do you agree with our initial view that a reference rate of £126k per 1 MHz of national spectrum for L band and S band radar spectrum would achieve an appropriate balance between providing incentives to ensure efficient use of spectrum while guarding against the risks of regulatory failure in setting the reference rate too high? If you consider a different rate would be more appropriate, please provide any evidence that you think we should take into account.</p>	<p>High fees are likely to result from the relatively large signal bandwidths that are necessary for radar. For theoretical reasons, currently considered to be insurmountable, a marine radar, whether shore or vessel based, needs at least some modes of operation that have a signal bandwidth approaching or even exceeding 20MHz. This is required to give resolutions to enable small craft to be seen in heavy sea clutter and to discriminate targets that are close together. A licence fee that appears sensible for 1 MHz of bandwidth would not be the case for 20 MHz. To mitigate costs operators might then look to reduce the fee by reducing bandwidth. This could lead to inefficiency, for example a restriction in pulse length usage may lead to a reduction in target detection ability. Cost differential between S and X band would encourage migration from S to X in so doing losing the benefits of S band on target detection in rain etc. Also until efficiencies are introduced to ships' radars, it is difficult to see how new shore based users, particularly of S band, could avoid interference from shipping in near</p>

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	<p>coastal areas.</p> <p>WITH REGARD TO THE USE OF 1 MHZ PRICING, STAKEHOLDERS HAVE ALREADY REQUESTED A REVIEW OF THE REFERENCE RATES FOR A NATIONAL ALLOCATION OF 1 MHZ IN RADAR BANDS . THIS WAS BECAUSE OF THE VERY SIGNIFICANT CHANGES IN THE MARKET SINCE THE INDEPEN-AEGIS REPORT ON RADIO SPECTRUM ADMINISTERED INCENTIVE PRICING FOR AERONAUTICAL AND MARITIME SECTORS (JUNE 2006). EVEN ALLOWING FOR THE “50% DISCOUNT”, VALUE AND DEMAND NEEDS TO BE DEMONSTRATED AFRESH IN THE LIGHT OF CURRENT AND FUTURE ECONOMIC CIRCUMSTANCES. WE BELIEVE THIS REVIEW IS ESSENTIAL BEFORE THE MODEL IS CONFIRMED.</p>
<b>Question 12:</b> Do you agree with our initial view that a reference rate of £25k per single MHz of national spectrum would be appropriate for deriving fees for licences to use X band radar?	See answer to questions 10 and 11.
<b>Question 13:</b> Do you agree that, generally, spectrum used by aeronautical radionavigation aids is currently uncongested? Do you believe that this may change during the next few years and, if so, approximately when?	No MCA comment.
<b>Question 14:</b> Do you agree with the basis on which Ofcom has arrived at its initial view on reference rates for aeronautical radionavigation aids?	No MCA comment.

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