speaking for airports

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AOA RESPONSE TO OFCOM'S CONSULATION ON APPLYING AIP TO AERONAUTICAL SPECTRUM USE

The Airport Operators Association (AOA) is the trade association that represents the interests of British airports. Our membership comprises 71 airport companies, representing all of the nation's international hub and major regional airports in addition to many serving community, business and general aviation.

In 2007 AOA member airports handled more than 228 million passengers, nearly 2.5 million tonnes of freight and over 2.3 million air transport movements. An independent study has also shown that these airports are major players in the aviation industry's contribution of some £11.4 billion to the UK's annual gross domestic product (around 1.2% of total GDP).

The views expressed are the product of consultation within the AOA's membership, and have been approved by the Association's Board.

General points

Aviation's economic contribution

Aviation makes substantial contributions to the UK economy. Oxford Economic Forecasting (2006) demonstrated that the industry contributed £11.4 billion to the UK's GDP in 2004, which alone represented 1.1% of the overall economy. Additionally, the aviation industry directly and indirectly supports more than 700,000 jobs.

Assuming aviation continues to grow in line with Government forecasts and historical trends in the last decade, aviation's contribution to GDP will rise to some £19.7 billion by 2010.

Aviation also supports other economic activities through international and domestic connectivity. The Eddington Report (2006) found that Airport expansion could generate wider economic benefits of over £13 billion additional GDP a year by 2030 if full implementation of the Government's 2003 Air Transport White Paper runway proposals was undertaken. Eddington also demonstrated that

increasing capacity in the Greater South East will reduce business costs by £ 6 billion by 2060 (net present value).

Aviation, like spectrum use, is an economic enabler which underpins GDP indirect GDP contributions in excess of its own. It needs to be treated as such in the scope of this consultation on AIP.

Aviation's use of spectrum

The use of aeronautical radio and radio-navigation aids has been commonplace in civil aviation since the end of the Second World War. Operationally, the use of these systems has immeasurably increased the safety of air travel. It is inconceivable that modern air travel could operate without sophisticated en-route and terminal air traffic control services, supported by air search and secondary surveillance radars, VOR/DME and ILS.

The Air Navigation Order (as amended to June 2008) recognises, and implicitly mandates the dependence of modern aviation on radio and radio navaids.

- Article 20 (1) of the ANO states that: "an aircraft shall not fly unless it is so equipped with radio communication and radio navigation equipment as to comply with the law of the country".

- Schedule 5 of the ANO sets out scales of radio and radio navigation equipment for civil aircraft.

- Part 9 of the ANO also gives the CAA power to mandate air traffic services. Where aircraft are operation under the Instrument Flight Rules (IFR) there is clearly a requirement for ground-based radio communications and radio navigation equipment.

As such, there are clear national legal and operational requirements for aircraft and airports to operate the range of systems that Ofcom is proposing to introduce AIP for.

Beyond this, aviation's use of spectrum is also mandated internationally, under the Chicago Convention (1949). Both ICAO and the World Radio Communications Conference (International Telecommunications Union) have a role in setting internationally agreed spectrum allocations for aeronautical use. Changes in these allocations cannot be imposed or changed by one state acting unilaterally.

The Cave Audit

The 2005 Cave Audit of spectrum recommended the application of AIP to 'public-sector' spectrum uses in order to establish a market mechanism to encourage the more efficient use of that spectrum.

There are several points in the final report that bear repetition.

> "AIP should be extended to military and civil aeronautical uses of the spectrum where it has the potential to help increase efficiency of spectrum use now or in the medium to long term. Beneficial effects of pricing could include:
> • Maximising the benefits to aviation of its existing spectrum holdings

> • Recognising and enabling other potential uses of the spectrum (*where alternative use would be possible*) [AOA's italics] **Cave Audit (2005) p.9**

Significantly, Professor Cave recognises that alternative use of aviation's spectrum holdings might not be possible.

> "An opportunity cost will be estimated if assessment of the factors above shows that there is *excess demand from other potential aeronautical users. If there is not, then the opportunity cost to alternative aviation users is effectively zero (in any bands where this was the case AIP could only be imposed on the basis of an opportunity cost to alternative users).* **Cave Audit (2005) p. 56**

AOA's interpretation of this passage is that AIP, based on the opportunity cost of spectrum, could only apply where an opportunity cost exists i.e. where there are competing *aviation* uses, or there are alternative non-aviation users.

Later in the same page, he is more specific:

> "If there is judged to be no prospect of alternative use due to international restrictions and since the UK is unable to act unilaterally in spectrum that is internationally harmonised for on-board use, then the opportunity cost of the spectrum for alternative use should be judged to be zero. **Ibid. p.56**

If the opportunity cost is zero, then the AIP cost is, effectively, zero as well.

In its *Response to Cave* (2006) the Government stated that:

> "Economic incentives such as AIP could be effective in promoting greater efficiency in aeronautical spectrum where there is flexibility to influence choice of technology or service. In many cases*, international agreements limit the scope to improve spectrum efficiency*, and safety considerations will remain paramount.

Ofcom has signally failed to demonstrate what spectrum efficiencies it believes the introduction of AIP to aeronautical uses will bring, given the largely international nature of aeronautical spectrum allocations.

Ofcom's proposals go further than those suggested by Cave and accepted by the Government. As proposed, AIP fails to recognise the essentially international nature of aviation spectrum use. Instead it seeks to impose a market mechanism where Professor Cave argued there can be no market.

Environmental Disbenefits

AIP will introduce a significant new cost to the aviation industry- AOA has calculated that an airport the size of Birmingham would pay between £800,000 and £1,100,000 per annum. NATS En Route would also have a significant liability.

The money raised from the industry by AIP would be unavailable for investment in technological and operational changes to allow UK aviation to benefit from the changes being made at a European level by SESAR and SESII. In the longer term this will reduce the ability to UK aviation to increase the

capacity of controlled airspace, to shorten routes, and to minimise the environmental impact of aviation through more efficient flight controls.

The UK Government applies the shadow cost of carbon: £25.50 at 2005 prices, adjusted annually for RPI and carbon's increasing climate impact (estimated at a further 2% a year). NATS estimates that air traffic management improvements will yield a 10% decrease in carbon emissions from UK flights, against a 2006 baseline.

In 2009 UK aviation emissions will total around 41,100,000 tonnes of CO_2. The 2009 Shadow Price of Carbon (SPC) will be £32.07. A 10% saving would, for argument's sake, represents 411,000 tonnes of CO_2 saved. This carbon has an economic value of £131.8 million. The SPC is an abatement cost: the market cost of actions taken to save that amount of CO_2.

If, as Ofcom suggests, aeronautical spectrum can be valued at £91 million, and Ofcom are unable to re-role the spectrum due to international agreements, then it follows that the industry will potentially have to cover that cost. £91 million represents a significant portion of the cost of abating 10% of aviation's carbon emissions.

Both Ofcom's Impact Assessment (which we look forward to seeing), and Government, will need to make an assessment of which represents the greater social good: spectrum charging in the absence of any international agreements, or the abatement of carbon emissions to reduce the dangers of climate change.

Ofcom's Consultation Process

Ofcom's consultation processes have been frankly poor. By relying on discussions with NATS and the CAA, neither of which can be regarded as representative of airports, Ofcom has failed to engage directly with airports or the AOA until after their consultation paper was issued.

Despite this, the indicative timetable (2009/10) for introducing AIP has remained fixed. As a result, a totally unreasonable timetable for the introduction of AIP is being imposed on aviation. By way of comparison, commercial radio got 2 years' notice, and terrestrial television got 7 years from 2007.

Equally, whilst AOA in no way opposes the suggestion that the RNLI, as a charitable, life-saving organisation should be exempted from AIP, Ofcom's announcement- ahead of the close of the formal consultation- seems at best premature and at worst a blatant disregard for the consultation process.

Summary of AOA's response

This response gives answers to the consultation questions posed by Ofcom.

In general, however:

1. The AOA accepts the general principle that aviation could use spectrum more efficiently, but as part of an internationally agreed programme of operational and technological change in which the UK should play a leading role;

2. As currently proposed, AIP seeks to attach an economic value to the use of spectrum. The market determines an economic value. Where there is no ability to trade (due to international constraints) there is no market;

3. The AOA believes that the unintended consequences of AIP may have an effect on the safety of air transport, particularly where general aviation and commercial aviation interact. We consider any detriment to safety whatsoever to be unacceptable;

4. AIP will present airports with a significant cost that they will not easily be able to pass through to their customers. Some airports will become loss-making as a result;

5. AIP will make less money available for investment in new technologies associated with SESAR, which will bring a environmental impact by reducing the ability of industry to reduce its emissions;

David Bishop
Head of Policy

Airport Operators Association
30 October 2008

Question 1: 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?

The Cave Audit recommended that where international agreements precluded the reallocation of spectrum then the opportunity cost of that spectrum was zero (unless an alternative aviation use existed). This was tacitly endorsed in the Government's response to Cave.

Accordingly, the AOA and its members argue that an efficient apportionment of AIP fees in the aeronautical sector would reflect that zero opportunity cost.

Question 2: 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.

Ofcom has argued that as the use, or carriage, of safety equipment is mandatory for some aircraft and airports it would be impossible for AIP to bring about a detrimental impact on safety.

This is somewhat disingenuous, as it's tantamount to admitting that AIP will be unable to bring about spectrum efficiencies in some circumstances, which seems to undermine the case for applying the AIP cost.

More broadly, some parts of the aviation system are not subject to mandatory safety requirements- particularly the general aviation sector. Introducing an elective cost on the use of VHF and navigational aids and some GA flyers will vote with their feet: foregoing VHF systems on their aircraft, and flying from unlicensed aerodromes which aren't subject the CAA's rigorous licensing criteria. This in itself would represent a material detriment to safety.

Question 3: Do you have any evidence which indicates that AIP charged to ground stations could have a material detrimental impact on UK competitiveness?

Aviation is a significant industry in its own right: supporting over 700,000 jobs and contributing more than £14 billion to national GDP. Aviation also plays a vital role in underpinning the success of other sectors of the UK economy.

The Eddington Study noted that the "connectivity of the UK's airports is particularly important for supporting certain types of business activity, such as the financial services and banking sector". The report went on to state that two key determinants of connectivity were the range of destinations served, and the frequency of connections.

Eddington was unequivocal in its view that good aviation links are vital to support the growth of regional economies. Air services from outlying regions are, by their very nature, 'thin' routes; carrying relatively small numbers of people in small aircraft. As such their economic position is precarious. The Study also placed great importance on the ability of air transport to allow people to travel and do business elsewhere in the UK, or abroad, in a single day.

AIP costs do not reflect the size of an airport, or its ability to pay- solely the scale of its VHF and radionavigational aid use. AOA has conducted a survey of its members, and their potential AIP costs, as set out in Ofcom's consultation document.

The table below summarises the average airport costs of AIP:

	Mean Costs	**Median Costs**
VHF	£27,775.00	£28,050.00
Navaid	£569,133.33	£553,500.00
TOTAL	£596,908.33	£583,200.00

(Source: AOA September 2008- based on a survey of 12 airports)

These costs fall most heavily on smaller airports, serving fewer flights and passengers, but whose activities are economically vital for their surrounding areas. This 'added value' is difficult to quantify, although a study by York Aviation, published in 2005, found that the gross value added (GVA) was in the region of £60,000 per airport employee. This does not reflect the added value of the activities taking place at the airport- of the journeys facilitated.

AIP will impose costs which airports, particularly those in the regions, will find difficult to pass on, and which may restrict their profitability (see next question). Airports unable to operate profitably are simply unable to operate. The loss of jobs and services would, in turn, have wider economic impacts.

The AOA would be more than happy to work with Ofcom as it produces its Impact Assessment, to ensure that these wider economic disbenefits are identified and quantified.

Question 4 : 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.

The table below shows the impact of AIP costs (based on Ofcom's consultation document) at 5 airports:

Airport	**Cost of AIP**	**Operating Profits**	**AIP as % of Profits**
Luton	£427,450	£11,800,000	3.62%
Cardiff	£765,700	£7,450,000	10.28%
Inverness	£512,800	-£2,500,000	-20.51%
Humberside	£632,750	£1,300,000	48.67%
Birmingham	£533,650	£22,907,000	2.33%
Manchester	£1,179,550	£96,500,000	1.22%

AIP's costs are broadly uniform (on a per-runway basis: Manchester has two runways). These costs are not related to the traffic handled by an airport, or its operation profits.

It is apparent that some airports will, given their profitability, be presented by significant costs from AIP. In the case of Humberside these costs would represent almost half of its profits. Inverness airport, which is currently owned by Highlands and Islands Airports Ltd (itself owned by the Scottish Government and operated to provide lifeline services in the north of Scotland) would see its losses increased by a further sixth. This would impose a cost on the taxpayer for little discernable gain, whilst diverting funds currently used for the benefit of those taxpayers.

Question 5: 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. Aircraft are effectively mobile stations, broadcasting on VHF and some radionavigational aids. If they continue to use spectrum to the same extent that they currently do, then the suggested benefits of AIP in terms of spectrum efficiency become even more illusory.

Equally, it would be difficult to apply the costs of AIP via an intermediary such as airport landing charges. The nature of the commercial agreements between airports and airlines is such that, with the exception of three UK airports (Heathrow, Gatwick and Stansted) which are price-regulated by the CAA, a new cost such as AIP could not necessarily be passed on within the scope of existing contracts.

Question 6: 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?

We believe that Ofcom should be consistent with the recommendations of the Cave Audit, and apply an opportunity cost of zero where international agreements prevent the reallocation of spectrum on a unilateral basis.

Question 7: 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?

The aviation industry has recently invested considerable amounts of money in moving to 8.33 kHz VHF channel spacings. This increased efficiency in spectrum use was incentivised not by a spectrum cost, but the need to increase the number of channels available to aeronautical users as flight numbers increase.

VHF allocations are not made within the UK, but internationally. The ability of the UK to abrogate those arrangements unilaterally is doubtful, so the scope for VHF reallocation away from aviation is unclear.

Any alternative applications for reallocated VHF spectrum would have to be subject to strict controls on interference, to prevent any diminution of aviation safety. This could also prove a bar to alternative uses, which would in turn strengthen the argument against unilateral reallocations.

Question 8: 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?

No comment.

Question 9: Are there any short term reasons specific to the sector(s) why it would be inappropriate to apply fees from April 2009?

The aviation industry is currently facing the ongoing impact of historically high oil prices, albeit they have now fallen back below $100 a barrel. The high price of oil, together with ongoing financial and economic turmoil has weakened the performance of the industry. 6% annual growth across Europe in 2006-7 has fallen to 0.1% in 2007-8 (source: ACI Europe). This precarious position has been reflected in the failure of a number of airlines: most notably XL Airways, but also EOS and Silverjet. To date only one airport has closed: Land's End St. Just.

From November 2009 a new aviation tax, Aviation Duty, will apply to flights to and from the UK. This tax will be considerably more complex than the Air Passenger Duty it replaces, and has the potential to increase the financial pressures on the sector. AOA would argue that Ofcom should seek to defer the introduction of AIP until the impacts of Aviation Duty become clear.

Question 10: Ofcom would welcome stakeholders' views on the factors which should be taken into account when apportioning fees between individual users of radars and racons.

AOA believes that, as argued in the Cave Audit, where international agreements preclude the reallocation of spectrum to alternative non-aviation uses the opportunity cost of that spectrum is zero.

Question 11: 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.

No. AOA believes that, as argued in the Cave Audit, where international agreements preclude the reallocation of spectrum to alternative non-aviation uses the opportunity cost of that spectrum is zero.

Question 12: 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?

No. AOA believes that, as argued in the Cave Audit, where international agreements preclude the reallocation of spectrum to alternative non-aviation uses the opportunity cost of that spectrum is zero.

Question 13: 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?

AOA considers that the currently uncongested nature of the spectrum used by aeronautical radionavigation aids is evidence of a lack of competing uses. This suggests that there is no justification for a high rate of AIP, as increased efficiencies would bring little real benefit (even assuming international agreements were changed to allow a re-allocation of spectrum).

Question 14: Do you agree with the basis on which Ofcom has arrived at its initial view on reference rates for aeronautical radionavigation aids?

No. AOA believes that, as argued in the Cave Audit, where international agreements preclude the reallocation of spectrum to alternative non-aviation uses the opportunity cost of that spectrum is zero.