APPLYING AIP TO THE MARITIME AND AERONAUTICAL SECTORS: NATS' RESPONSE

NATS welcomes the opportunity to respond to the AIP consultation document and our ongoing dialogue with Ofcom. The answers to Ofcom's consultation questions are presented below. However, NATS does not believe that the questions posed provide a sufficient means of addressing all of the issues raised in the consultation paper. NATS has therefore also included a short overview paper setting out our key reactions to the consultation paper as a whole.

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?

It is essential that Ofcom continue to ensure that all affected stakeholders are consulted on the proposals and that their views are taken into account in the impact assessment (referred to in §1.17) that needs to be fully considered before any decision is taken.

If this proposal were to go ahead, the process of determining the apportionment of AIP fees should not lie solely in the hands of the government departments or their specialised regulators. Operators of the systems for which AIP is being targeted need to be fully involved in discussions in order to ensure a fair, transparent and equitable apportionment of fees.

With regards to any institutional arrangements that might need to be put in place, we suggest that maritime and aeronautical sectors are considered separately, except where there is spectrum overlap, since the sectors operate in different ways.

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

NATS' ability to safely and efficiently guide traffic is dependent on access to clean, interference free radio spectrum for communication, navigation and surveillance purposes. Spectrum constraints could have a serious impact on safety. Neither NATS, our regulator the CAA, nor airlines will accept any action which has the potential to lead to any degradation in safety and NATS would need to mitigate any potential safety impact from Ofcom's proposals. Mitigation measures, such as placing limits on capacity, may have a detrimental effect on delay performance.

NATS has worked hard to reduce the safety impact from infringements into controlled airspace by general aviation users. NATS developed an extended Lower Airspace Radar Service (LARS) service around London in response to the inability for a 'rule-based' solution – such as UK mandatory transponder carriage or improved training for pilots – to be put in place to address the safety concerns.

Unlicensed aerodromes[1] and general aviation (GA) aircraft not flying in controlled airspace are not required to use VHF radios, therefore inappropriate fees may

[1] Under civil aviation legislation

lead to GA aerodromes choosing not to offer otherwise non-mandatory radio services so as to avoid paying the additional spectrum fee. This may lead to GA aircraft users choosing to cease the carriage of radios, which would clearly raise safety concerns as those aircraft will then not be equipped to communicate should they, for example, stray into controlled airspace or need to make use of the national 121.5 MHz alert and fixing facilities. This would represent in a step backwards for the industry which is trying to promote the greater use of radios by GA and would in part negate the benefits seen as a result of the introduction of facilities such as the London LARS.

If a new ground station pricing regime was to be brought in to encourage further uptake of 8.33kHz spacing in advance of any extended European mandate, then NATS would need a mechanism by which to pass this charge onto those users that still need to be incentivised e.g. GA users and those flying solely in lower airspace where the current 8.33 kHz mandate does not apply, rather than penalise those that have already invested in 8.33 kHz technology.

In this case NATS believes that it would be more worthwhile seeking a mandate in Europe to lower the flight level at which 8.33kHz is required than to charge those organisations that have already equipped.

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

If applied unilaterally in the UK, and if the costs are passed on to commercial airlines through en-route user charges and through airport landing charges, then we are of the view that spectrum pricing could result in a detrimental impact to the competitiveness of the UK as a destination.

In addition, we note that higher air travel ticket prices could have a detrimental effect on the competitiveness of the devolved regions of the UK, which are further away from large population hubs, and have fewer alternative forms of transport available.

Due to the complexity of UK airspace and the associated costs of handling aircraft in such airspace, the UK already has one of the highest ATC unit rates in Europe. NATS already witnesses behaviour on the part of some airlines so as to avoid paying the UK ANS charge, such as airlines flying longer routes around the UK[2], or plotting a shorter route within the UK than would be operationally optimal. Adding AIP costs to the unit rate could exacerbate this problem, especially those costs envisaged in the latter phases of AIP implementation. This has the potential to result in a negative impact on NATS' income from user charges and for the environment if airlines are flying longer distances (and hence using more fuel) to avoid paying the additional charge.

Unilateral implementation in a sector which operates internationally and is governed by an international framework, whilst not impacting on point to point competition between airlines could have a negative impact on the competitiveness of UK-based airlines as the spectrum costs would form a higher proportion of their total cost base, thus detrimentally affecting their ability to compete on other routes.

[2] As was recently reported by the BBC: http://news.bbc.co.uk/1/hi/england/7124021.stm

If the charges were implemented on a unilateral basis, NATS could be incentivised to reduce use of spectrum so as to reduce costs. This would be at the expense of operational efficiency and, through the European frequency planning process, the UK would effectively hand this spectrum to adjacent states, i.e. we would pay and other European States receive more spectrum whilst not achieving the objective of a more efficient use of spectrum in the UK.

Finally, higher charges for spectrum will affect the way in which NATS manages airspace planning and could make it more difficult in the future to increase capacity. NATS has traditionally used a combination of changing routes and the splitting of existing sectors as a means of increasing airspace capacity, the latter requiring additional communications frequencies. As this requires us to use additional frequencies, the introduction of AIP would increase the cost of re-sectorisation, and hence increase the level of the UK unit rate.

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, for other users.

NATS believes that the two tier VHF pricing proposal outlined in the Ofcom consultation document is too simplistic and the implied assumptions that all VHF services deny frequencies from the same volumes of airspace and have the same level of reuse are incorrect. Some guidance might be taken from the current aeronautical ground station licence structure.

The opportunity cost methodology adopted does not accurately reflect the actual value from an alternate use of the spectrum, in light of the lack of a viable alternate use for the frequencies. The radio horizon of the aircraft (once away from the aerodrome surface) is always the dominant factor so a frequency released in the UK may then be used by aircraft in France, and this will not permit an alternative use over much of England and Wales.

As spectrum usage is governed by ICAO standards aviation users should be incentivised on a Europe-wide basis at the minimum so that any spectrum freed up is surrendered on a European basis for alternative use. Without such co-ordinated action, the value of the spectrum for alternative use is zero, and hence the opportunity cost should be set at zero.

We cannot comment on the financial impacts of the reference rates for the other non-VHF systems given the lack of detail provided and will do so once Ofcom has advanced its thinking in these areas.

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?

We recognise that non-UK registered/licensed aircraft would not face AIP fees if they were linked to UK WT Act licences and we also note Ofcom's statement in §4.7 that it is not proposed that AIP should be applied to ship radio licences.

Whilst we understand the argument that any proposal to charge AIP direct to WT Act licences for aircraft could have a detrimental impact on the competitiveness of

UK aviation as non-UK registered/licensed aircraft would not face such a fee but would still use the service, it is the only mechanism available to Ofcom to directly influence the carriage of more spectrum efficient aircraft equipment, e.g. 8.33 kHz capable radios.

NATS also challenges Ofcom's assertion therefore that AIP should be applied to operators of ground stations. If, as Ofcom stated in its workshop on 29th September, one of the objectives of applying AIP is to incentivise the UK to influence a more efficient use of spectrum across Europe, NATS believes it unfair for the Ofcom to propose a charge on a part private sector body, i.e. NATS, and other private sector organisations, i.e. the airport operators, that have no direct means of changing European or International Standards governing spectrum use. If Ofcom believe that AIP could be used to incentivise the UK to push for change on a European or international basis (a view that we do not believe holds much weight), then NATS would argue that AIP should be applied to the body that has the greater political influence in Europe, i.e. the DfT or CAA.

We view the maritime proposals for ships licences as a missed opportunity for Ofcom to provide pricing incentives to improve the efficiency of spectrum use in the UK by ships' primary radar systems at S and X band given Ofcom efforts to do the same for the far smaller populations of fixed aeronautical and maritime shore/land based radar systems operating in the same frequency bands. For example it is understood that unwanted emissions from marine radar operating above 2.9 GHz fall across the 2.7-2.9 GHz aeronautical radar band thus potentially reducing its value to other users. We therefore find it inequitable that Ofcom is seeking to impose incentives to aeronautical radar operators to improve their spectrum use whilst apparently ignoring radar systems on UK based ships that, while they may be lower power, may have a larger cumulative effect on the quality of the spectrum due to their much larger population.

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?

In principle, NATS agrees that discount fees for charities could be a sensible approach, in particular for those users that provide humanitarian services or charities such as the RNLI and Air Ambulance.

However NATS would question the mechanism through which such a scheme could be administered. For example, if this were to be administered by NATS, then any administrative costs for such a mechanism incurred would be passed on to UK en-route and airport charges and so paid for by other users, amplifying the negative economic impacts highlighted above.

Alternatively, NATS suggests that qualifying flights could be responsible for claiming a subsidy from HM Treasury which would be equal to the discount highlighted in the consultation 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?

NATS does not believe AIP is appropriate for incentivising VHF spectrum usage in the UK aeronautical sector.

As recognised in the Cave Review (§3.17 of this consultation) there are no opportunity costs from alternative applications since the use of spectrum for aviation purposes is defined through international agreements which prescribe the frequencies to be used. We challenge Ofcom's assertion that international agreements can be changed over time due to unilateral pressure from one State and that this counters the view of the original review.

In addition, NATS and other air navigation service providers (ANSPs) have no scope to change usage to 8.33 kHz unilaterally (due to the need for suitably equipped aircraft) and therefore the "incentive" of AIP would have no effect on behaviour. Hence the proposal would simply add costs to the aviation industry, both to ANSPs and, to the extent that there is pass-through, airlines - particularly those based in the UK and are already 8.33 kHz equipped. Given this, in our view the application of AIP at this stage would amount to an unjustified and costly regulatory burden that will be viewed as a tax.

Both NATS and commercial airlines have already taken steps to reduce VHF communications channel spacing (8.33 kHz) in upper airspace, as a result of a mandate agreed by States through Europe. NATS has converted upper airspace sectors where it was operationally and technically feasible to do so and we are considering options for further conversions. All of NATS' en-route radio stations are currently 8.33 kHz capable. However the major block to an increased use of 8.33 kHz by a given ground station is the existing vertical flight limit at which 8.33 kHz is mandatory and the current lack of GA equipage. Without an appropriately equipped population of aircraft that will be using that ground station, it cannot convert to 8.33 kHz operation.

Unilateral action by the UK does not address the fact that aviation is a highly competitive global industry; under the ICAO frequency planning process, any spectrum freed up in UK would then be assigned to other European ANSPs, hence again providing no value to other potential uses, again resulting in an opportunity cost of zero.

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 radiocommunications? 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?

NATS does not agree with this view. Spectrum use for business radio is commercial and is not allocated globally as it is for aeronautical use. Aeronautical use of spectrum is to support safety of life services.

The business radio model cannot be applied to the aviation sector as the business radio model is essentially two dimensional and would not be able to take into

account the height of the aircraft. Once the aircraft is higher than the ground station antenna, the aircraft is the dominant emitter (and receiver) and the coverage of the ground station transmitter is immaterial in assessing the area over which a frequency is denied to another user. This leads in part to our view that fees should be applied on a per frequency basis and not per ground transmitter.

The purpose of the business radio model as we understand it is to provide an incentive to minimise coverage (i.e. power/ground antenna height) and, in an extreme, to remove the radio service entirely and find a different way to communicate, for which there are many possibilities in a business radio context. As Ofcom points out (§3.50) the CAA obliges licensed[3] operators to provide certain services and in the VHF communications case stipulates internationally mandated requirements on received power levels. Aviation has no alternative to radio or alternative technology that may be used in VHF and ground system operators cannot respond to an incentive to reduce coverage below that which is required to provide a service that we are (legally) obliged to provide.

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

NATS is currently mid way through a regulatory control period (CP2) in which prices have effectively been capped until the end of 2010. Any additional cost increase to NATS cannot easily be passed onto users during the current control period and hence the cost would have to be absorbed by the company. This would represent a disproportionate regulatory burden at a time when NATS' revenues are expected to be impacted by the downturn in airline travel. In general, short term regulatory uncertainty, such as the implementation of AIP, also adds the secondary effect of increasing potential risk for the business – which could lead to difficulties in securing finances for future capital investment.

If Ofcom chooses to bring in AIP in the aeronautical sector, then NATS argues that the charge should be levied on the body best able to influence international or European use of spectrum, the DfT or CAA. It would then be down to these bodies to decide how or whether to pass on the charge.

Moreover, as discussed elsewhere, there are currently no alternative technologies available to NATS (apart from those we are already using) that would lessen our spectrum usage.

New technologies are not expected to come on stream in the near future. The most significant opportunity to implement changes within the aeronautical operational concept and aircraft equipage is offered by the Community's SESAR programme that will define, implement and mandate the ATS system post 2020. Hence implementing an AIP based charge to incentivise a more efficient use of spectrum when there is no alternative available will simply increase our and, inevitably, airline costs without delivering a benefit to the sector.

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.

The charging algorithm needed and therefore the apportionment of fees to individual users of radar, whilst fairly taking into account other uses already

[3] through civil aviation legislation

sharing certain of the radar bands, is too complex to be discussed within this consultation. We suggest this is best addressed outside this consultation period where the issues can be more thoroughly discussed with other stakeholders and users. Ofcom might also wish to take a separate view of additional radar systems that are necessary to mitigate the effects of windfarms.

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.

In the context of NATS not agreeing that AIP is appropriate, we are of the opinion that these reference rates have not taken into account the existing availability of radar spectrum nor the other uses currently in the bands.

L band, for example, has many other uses, as recognised in the Cave Audit[4] so NATS questions how Ofcom will take into account the restrictions placed on radar use in the band by amateur TV repeaters, satellite navigation systems and space based radar systems and reflect these in the reference rate for radar systems in the band.

Ofcom should note that due to different propagation and other characteristics of L band and S band (and X band) the bands are not generally interchangeable in radar use terms.

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?

In the context of NATS not agreeing that AIP is appropriate, we will not comment upon the absolute value; however a scaling from the other radar band figures seems appropriate. NATS again questions how Ofcom will take into account the restrictions placed on radar use in the band by other services allocated at X band such as space based radar systems and reflect these in the reference rate for radar systems in the band.

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?

NATS does not agree that in general spectrum used for aeronautical radionavigation aids (ground navigation aids and secondary surveillance radar (SSR)) is uncongested. Our experience to date is that all radionavigation frequency bands are congested and we have experienced difficulties in securing frequencies for the services we provide. As with VHF communications, it is the radio horizon of the aircraft (transmitter and receiver) that is the dominant factor in frequency reuse so the fact that a given frequency is not used in the UK does not mean it is available for use in the UK as it may be in use in a neighbouring state hence precluding UK use.

[4] The 2005 Independent Audit of Spectrum Holdings

In addition new spectrum allocations made at the International Telecommunications Union (ITU) World Radiocommunication Conferences (WRCs) in 2000, 2003 and 2007 to the Radionavigation Satellite and Aeronautical Mobile Services in certain radionavigation frequency bands will increase the numbers of services in those bands but also potentially increase congestion in the next 10-15 years.

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

NATS disagrees with any unilateral action by the UK, at this time, to implement spectrum pricing for aeronautical radionavigation aids for the reasons set out above and in the cover note.

We would however state that it is not appropriate to seek to price the SSR frequencies as they are globally harmonised in use across civil and military airspace users with every system operating on a co-frequency, as such it cannot become more spectrally efficient and there is no possibility of any alternative use outside aviation for the foreseeable future.

NATS questions how Ofcom will take into account the other services that use or are allocated in the radionavigation bands under discussion.

Other issues

There are issues raised within the consultation document that NATS believes are factually incorrect and others with which NATS does not agree. We do not propose to correct Ofcom on those matters as part of this response nor should the lack of comment on any specific issue raised in the consultation paper be taken as NATS agreement to it and we reserve the right to come back to those areas as necessary in any future consultations.

NATS also questions whether Ofcom's current proposals are in line with Government Policy on aeronautical AIP, as set out in the Government's Forward Look document of March 2007.

NATS notes the issue on 9th October of a new Ofcom consultation that deals with so called "innovation licences" that are to be issued for use in "publicly managed spectrum". As no band allocations are specified in this additional parallel consultation it creates further uncertainty for this AIP consultation given that aviation operates in this public spectrum. This additional uncertainty appears to go against the spirit of Ofcom's stated Consultation Principles.