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05 October 2011

Dear Ken

**Consultation on NATS (En Route) plc (NERL) Flight Efficiency Performance  
Regime dated 2 August 2011**

bmi welcome the opportunity to comment on the above consultation, particularly in view of the opportunity it provides to incentivise NATS to drive flight efficiencies in UK airspace, with subsequent CO<sub>2</sub>, fuel, and cost savings. This is significant when considering the backdrop of increased environmental responsibility, rising fuel costs and the implementation of the EU-ETS scheme in 2012.

Further, U.K. airspace, and in particular the London TMA, have considerable opportunities to improve efficiency. The introduction of iFACTS in the very near future, and further developments in the medium- to long-term, coupled with NATS focus on CO<sub>2</sub> reduction, should act as enablers to achieve greater efficiencies.

The Flight Efficiency Metric should not be treated in isolation within the CP3 Performance regime, but as a component part. There are tradeoffs between the management of delays and flight efficiency, and it is important that the inter-relationship between the two, and the possible effects of trading one metric against the other are fully understood in terms of effective airspace management and financial incentives.

Our detailed responses to the questions posed follow below: -

**Do you consider that NERL has used best endeavours to develop a flight efficiency regime?**

We believe that NATS are to be congratulated on the work that they have undertaken in this area. The proposed flight efficiency metric is more realistic compared to any other proposals in Europe as it combines both horizontal and vertical efficiency.

However, it should be noted that it is not perfect. The key area of concern from a CP3 regime perspective is that airspace and tactical restrictions are applied to maximise throughput, and minimise delays. Such restrictions, particularly in the vertical profile will not be deemed as inefficient, as the operator will be required to file at the new levels, and the metric compares RFL to actual levels.

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We believe it is important to understand the trade-offs between the various metrics within the CP3 regime, and the effect of investment not only by NATS, but round the busy airport environments such as Heathrow. We will discuss this further later in our response.

**Do you agree that there should be a flight efficiency performance regime from the start of 2012 and that it should be based on the 3Di score?**

We believe that there should be a flight efficiency performance regime from the start of 2012, and although the 3Di score is not perfect we believe it is fairly well advanced and as such should be used subject to the concerns expressed below.

Further, we believe the 3Di metric would highlight the key areas of inefficiency within the system and deliver subsequent benefits subject to the limitations already discussed, and there is the opportunity to make further improvements to the metric during the course of CP3.

We would re-iterate our stance that the interaction with the delay metrics has clearly not been shown, and must be understood. For example, NATS have provided information on the range of daily scores of the 3Di metric, and it would be interesting to correlate these against the reasons for the increase in inefficiency, and similarly the levels of delay performance.

However, the potential benefits of a **truly** incentivised metric outweigh our concerns in this area, but we would like to see a greater understanding of the interaction between delay and flight efficiency metrics ahead of the next CP discussion.

**Do you agree with NERL's proposals for the par value and dead band? If not, on what basis should the par value and dead band be set?**

bmi do not agree with NERL's proposals for the par value and dead band. While we accept the immaturity of the metric, we believe that in line with delay metrics, the proposed value is over-cautious and does not provide NATS with sufficient incentive to deliver real efficiencies.

The par value of 25.5 units is already being exceeded by NATS with the 3Di score for 2010 being recorded as about 24 units. bmi also believe that there are a number of work streams that have the potential to improve the score in the short term. These are: -

1) iFACTS

iFACTS is currently in the process of being implemented with operational training well underway. iFACTS provides up to a 20% increase in sector capacity and in certain circumstances even more. This increase in capacity will lead to a reduction in delays, and greater opportunities to provide improved climb and descent to aircraft, along with more directs due to the nature of the tool. This equates to a reduction not only in delay performance but also an improvement in the 3Di score.

These profile improvement opportunities were discussed, and confirmed at the OPA on the 4<sup>th</sup> October 2011, and as such bmi expect real benefits and a reduction in the 3Di score to be realised as a result of the significant investment in the system. It is interesting to note that a significant CO2 saving was attributed to the implementation of iFACTS through iFOS.

We would suggest that such benefits will not be shown in the historical trend data, and will only fully start to appear during full implementation into 2012. Please see our further comments on this later in this section.

## 2) NATS Focus on CO2 reductions

NATS are to be congratulated on the work they are doing with the operators to reduce CO2 emissions, and remove unnecessary flight profile restrictions, as well as providing better route opportunities. We expect this work, coupled with the capabilities of iFACTS, and other changes to also provide benefits resulting in a reduced 3Di score. For example, NATS believe that the Dover/Lydd airspace development being implemented in November this year is expected to reduce CO2 emissions by 2000t per annum, and enables more efficient descent profiles. While this may not correlate exactly with a reduction in 3Di score there is no doubt it will help the situation.

There are numerous other initiatives that are taking place, and bmi would expect such benefits to be delivered in terms of a continuous improvement regime, reflecting in an improved 3Di score.

## 3) Operational Freedoms at Heathrow

The BAA have recently agreed with the DfT, and with involvement of the CAA, a set of trials of Operational Freedoms at Heathrow from late 2011 into early 2012, and during the Olympic period. Such trials are expected to deliver amongst other benefits reduced holding at Heathrow, and this is a large component of the current 3Di score. We would expect further reductions in 3Di score as a result.

Therefore, we would re-iterate our view that the par value of 25.5 is excessive in that NATS are currently performing better than this figure; there are a number of work streams which we believe will enable significant further improvements; and iFACTS will be implemented. Such benefit streams will clearly not show in any historical analysis but need to be factored into the deliberations.

bmi also believe that the delay metric values were set at too cautious a level, and as such allow potential trade-offs between delay and flight efficiency. We have concerns that for the reasons stated above the 2012 3Di metric will show a significant improvement compared to historical data, and as such the positioning of the par value based on historical data is misleading.

The latest evidence from NATS suggests that the monthly 3Di score for July and August 2011 fell in the range of approximately 21.5 to 23.0 against a rising traffic demand, which suggests improvements are starting to appear from the work being undertaken. Although we are aware that other factors may be in play.

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Further, we believe that the dead band is set at too wide a level, and does not act as a significant incentive, for NATS to move away from penalties and into a possible bonus regime, particularly against a backdrop of work packages and new tools that will improve capacity and safety, reduce delay, and present greater opportunities for flight efficiency improvements.

In terms of consistency checks on dead band size, NATS make three arguments for the width of the dead band as follows: -

1) Historical – tracking a level of daily variation around a central level of performance. We believe this argument is flawed as the metric is annualised. Therefore, the daily tracking shows a wider range of variation to allow for the peaks and troughs, and these tend to be smoothed out over an annual basis. Between 2006 and 2010 the par value of the 3Di score varied between 28.2 and 22.7 – a range of 5.5, hence the proposed value of 25.5 at it's mid-point, and gives a wider dead band – cautious view of 30 to 21. This makes no allowance for any improvements that the end user is funding. The real historical range as mentioned above is 5.5 – a figure we will return to later.

## 2) Precedent

bmi believes that this argument is irrelevant – as NATS themselves have pointed out the metric is untried, and any target or dead band should be suitable for purpose, and based on data rather than on other metrics.

## 3) Future

bmi believes that this argument is also flawed. NATS make the statement that the “3Di score will rise with expected increasing level of traffic together with unexpected events, NERL efforts will seek to mitigate this pressure on 3Di”

We believe this is flawed in that

a) Unexpected events have been part of the score in previous years, and as such are reflected in previous year's scores, and

b) Increasing levels of traffic do not necessarily reflect on the 3Di score. NATS historical annual average 3Di score does not appear to provide a direct correlation with different levels of traffic

As per our comments earlier in the response the overall monthly trend appears to be stable, or decreasing for the 3Di score against increasing average daily traffic levels for July/August this year.

Finally, the range takes no account of the work currently being undertaken to improve the 3Di score.

bmi recognise the significant potential gains from NATS implementing this metric, and being incentivised to deliver. We also recognise the immaturity in the metric. However, we would question the ratio of bonus to penalty payments within regulatory settlements to

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date, and whether sufficient incentive has been applied. It is not realistic to expect a par value of 25.5 to be set when currently NATS are ahead of that target, and latest data suggests that the figure is reducing further, coupled with known improvements which will be realised in 2012.

Therefore, bmi are proposing a par value of 23.0 with a dead band of 3.0 units. We believe this will provide sufficient incentive, while allowing some leeway for unexpected bonus/penalty payments. The reason for our dead band range of 6 units is the previously mentioned historical annualised data range of 5.5 units.

At the lower end of the dead band this would result in a 1 unit reduction on NATS proposal before a bonus payment would be activated, while the top of the dead band, which we already consider too high, shows a reduction which provides a significant incentive for NATS to move away from a possible penalty.

**Do you agree that flight efficiency incentive rate should be set at £0.2 million per unit capped at 20% of available money at risk? If not on what basis should payment rates be set?**

bmi agree with the principle of a bonus and penalty regime suggested by NATS along with the level of money at risk for the CP3 period. There is an argument for future CP periods that a greater degree of balance, with a link between the delay and flight efficiency metrics is put in place to ensure that the metrics provide a truer reflection of the overall efficiency of the airspace.

As we have suggested a different par value and dead band, then we believe the £0.2million per unit rate for bonuses would not be appropriate. NATS have stated that the best daily average 3Di score was 9 units on Christmas Day, and we do not feel that this is achievable on an annual basis. When coupled with our lower proposal for par value/dead band then the proposed bonuses do not provide a linear regime. We are keen to ensure that the incentivisation actively encourages NATS to deliver the benefits of improved flight efficiency, within a reasonable target environment, while recognising the significant savings that will accrue to the airline community even when allowing for imperfections in the design of the metric.

Further, in terms of the potential penalties we believe that current proposal gives NATS sufficient headway to ensure that they will not be in a position to pay a maximum penalty due to the structure of their proposal, the par value, the dead band range and the number of units required before the maximum penalty is achieved. In our opinion the upper and lower bands for maximum bonuses and penalties should be changed to provide even greater focus and incentivisation.

For example, the maximum bonus/penalty could be set at £0.24m per 3Di unit score. With £2.4m available for bonus payments this equates to 10 units, resulting in a lower limit 3Di score for maximum bonus of 10 based on our proposal. This translates at the other end of the scale based on a £4.8m penalty limit to 20 units, with maximum penalty payable at 46 units. This would act as a clear incentive to NATS to ensure that maximum benefits are achieved.

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**Do you agree with the adjustments proposed by NERL? Are there any other adjustments that should be made?**

bmi believe that that there may well be exceptional events that affect the 3Di score, but that events such as volcanic ash, adverse weather, and airline strikes have been accounted for in previous years and we do not accept that adjustments should be made for all of these.

While it could be argued that the Olympics provide a special case it remains to be seen whether we will indeed experience the volume of traffic predicted. Further, NATS have alleviation for the delay metric during the Olympic period, and will be looking at a higher degree of systemisation during this period including specific routes and scenarios. The plan for the Olympics is business as usual, and as the metric is based on comparison between filed and flown rather than true vertical profile efficiency we believe that this may not warrant exemption.

The Operational Freedoms trial at Heathrow during the Olympic period is expected to provide reduce airborne holding, and as such may have an impact on reducing the overall 3Di score.

However, there are two possible alternatives which may be explored.

- 1) The dead band is marginally stretched to 4 i.e. a range of 19 to 27 based on our proposal in year 1 of the metric i.e. during the bedding in period, and taking due consideration of the Olympic impact, or
- 2) The results are reviewed at the end of the Year, and the Olympic period is removed only if it has shown to have a significant and profound effect on the results.

In terms of traffic mix bmi do not believe that NATS should be penalised or receive bonuses based on significant changes to the traffic mix, however, the suggestion is that there has not been a significant change in traffic mix over the last few years, and any changes in the future will be gradual. Further, we must not lose sight of the fact that NATS are paid significant sums to ensure that the airspace is managed efficiently, and must adjust to the changing requirements.

While we understand that a higher number of over flights may offset a deteriorating picture in other areas of the airspace, we believe that the proposed dead band should act as mitigation for gradual mix changes.

However, due to the immaturity of the metric we believe the annual review should consider the traffic mix change, and modulation of par value. bmi do not fully understand the calculation of the relationship between 3Di score and traffic mix in terms of the proposed modulation as we do not believe this has been clearly demonstrated.

**Do you agree with the annual review process proposed and the threshold for the test?**

bmi do agree with the annual review purpose on the basis of fit for purpose, however, we do not feel that we can comment on the specific threshold for failure. We would go further and suggest that the annual review also considers: -

- 1) Impact of the Olympics, and
- 2) Changes in traffic mix

in order to refine the metric during the next 3 years of the CP3 process. We would also reiterate our view that we are aware that such a metric has not been implemented before; is better than anything that has been proposed within Europe which potentially gives NERL a marketable opportunity within Europe, but which also does not reflect the true efficiency of the airspace.

**Summary**

In summary bmi

- 1) Congratulate NATS on the development of the 3Di Metric, and their lead in developing such a measure.
- 2) Acknowledge that the metric is not a perfect representation of flight efficiency, and are concerned that measures taken to reduce delays having an impact of flight efficiency will not reflect as inefficiencies.
- 3) Are keen to have the 3Di metric implemented from 2012
- 4) Believe the par values and dead band did not provide a sufficient stretch for NATS against a backdrop of improvement work packages and implementation of new controller tools as discussed in our arguments. Further we have proposed a revised par value and dead band. Our main concern is that setting the par value on historical data does not truly reflect improvements that are already in stream for 2012 for factors such as the implementation of iFACTS.
- 5) Suggest that the Olympic period exemption, and traffic mix par value modulation are not granted/implemented, rather that they form part of the annual review with a view to refining the metric on an annual basis during the course of CP3.
- 6) That the delay and flight efficiency metric are reviewed through CP3 to provide a balanced view and an understanding of the relationships between greater flight efficiency and delay management, and the appropriate bonus/penalty structures for future periods. They must not be taken in isolation.
- 7) That the annual review takes place and includes point 5) above.

Yours sincerely

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