

22<sup>nd</sup> April 2008

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## **Aviation Duty: a Consultation A Response From Environmental Protection UK**

We are writing in response to your consultation 'Aviation Duty: a Consultation'. Environmental Protection UK has considered the consultation documents and welcomes the opportunity to comment on the proposals.

### **About Environmental Protection UK**

Environmental Protection UK brings together organisations from across the public, private and voluntary sectors to promote a balanced and innovative approach to understanding and solving environmental problems, through policy development and education. We are a registered charity with 110 years experience of environmental campaigning, public information provision, producing educational resources and policy formulation.

Environmental Protection UK's noise and air quality policy committees have been involved in the development of this response. These committees bring together policy makers, regulators and practitioners from local authorities, consultants, developers, academics, industry, interested NGOs as well as members from Environmental Protection UK's regional divisions. As such they are able to draw on a wide range of expertise and views from representatives of the entire air quality and noise communities.

### **Our Conclusions on 'Aviation Duty: a Consultation'**

Environmental Protection UK believes that the air [passenger] duty system should have the following aims:

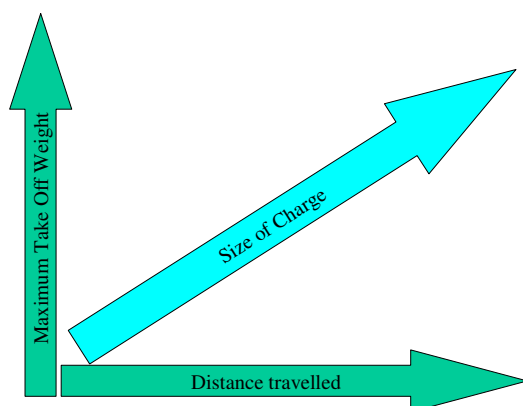
- Reflect the external cost of the journey's environmental impact, and communicate this information directly to the passenger
- Reward airlines who invest in cleaner, quieter aircraft
- Reduce CO<sub>2</sub> emissions by encouraging efficient loading of aircraft, and by encouraging modal shift onto lower CO<sub>2</sub> forms of transport where these options exist

The concept of a 'per aircraft' duty system would appear to reflect some of these aims better than the current Air Passenger Duty System, encouraging more efficient loading of the aircraft and also covering air freight for the first time. We therefore support the 'per aircraft' concept, with the caveat that the implementation of the new duty should be closely monitored to ensure perverse side effects are not encouraged, e.g. incentivising cut-pricing to fill the last few seats, further boosting aviation demand.

Although we offer cautious support for the concept of a per plane duty, the actual implementation as discussed in the consultation document is deeply flawed, due to the lack of consideration of aviation's position in a sustainable transport system.

From the consultation document we understand the Government's preferred system for levying the new duty is as shown in the figure below, with the charge increasing in either bands, or a linear or non-linear function:

*Fig 1 – The Government's preferred air duty system*



Whilst direct carbon pricing must be pursued, we recognise the immediate constraints on achieving this quickly, and thus support the idea of Maximum Take of Weight as duty criteria, as this has a strong relationship with aircraft size and capacity, and therefore emissions. On the face of it distance travelled is also a sensible criterion, until we consider aviation's position in the transport system.

If Government policy is to manage and reduce CO<sub>2</sub> emissions from transport then, where modal options exist, financial policy should encourage travellers towards the mode with the lowest CO<sub>2</sub> emissions per kilometre. However, under the proposed duty system the most lightly taxed flights would be heavily loaded (typically low cost carrier) short haul flights that on many routes compete with domestic and continental rail, in effect encouraging modal shift from rail (low carbon) to air (high carbon).

In addition to this the impact of aviation on local air quality and environmental noise is largely linked to the number and type of aircraft taking off and landing, rather than the distance each aircraft is travelling. A system that charges duty based on distance travelled does not reflect this disproportional impact at landing and take off when compared to the cruise stage of a journey.

Environmental Protection UK therefore believes that duty should not be linked to distance travelled, i.e. that duty should be flat rate with respect to distance. We would like to see further modelling work by the Treasury and/ or the Department for Transport on the effect of the price sensitivity of domestic and near continent travel choices, and the likely modal shift effects of the new duty system.

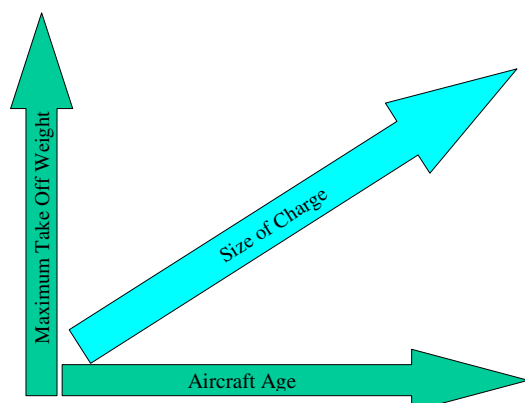
In addition, we would also like to see more work done on the differing elasticities of leisure and business travel, recognising the risk that crudely stepped tax could incentivise further expansion of already rapidly growing long haul leisure markets, with their very high absolute CO<sub>2</sub> emissions.

Although we do not support the concept of linking the duty to distance travelled, we do see value in secondary criteria for setting duty levels in addition to the Maximum

Take of Weight of the aircraft. Here we see aircraft age (or more specifically the age of the aircraft's engines) as offering a good match with the CO<sub>2</sub>, air quality and noise performance of the aircraft.

Our suggestion for the setting the level of the 'per aircraft' duty charge is therefore shown in the figure below. This system we believe could make a somewhat better contribution toward the three aims we listed at the start of this section, and, importantly for the Government's objectives on climate change, help to manage CO<sub>2</sub> emissions from transport as a whole, rather than pick out aviation as a single sector.

Fig 2 – Environmental Protection UK's suggested air duty system



## Section 1 - Background

Environmental Protection UK believes any development of aviation should be in the context of the following:

### General

- The Government should not seek to expand the infrastructure supporting the aviation industry purely on a predict and provide basis, where this will result in unacceptable levels of environmental or social harm.
- Where new infrastructure is required, or where existing capacity is expanded, the mitigation of further environmental and social harm must be seen as a key priority.
- Policies on aviation should be developed in a way that is consistent with the approach used for other transport sectors, and aviation should be fully bedded into an integrated transport policy, rather than being treated as a separate case.
- The Government should reduce the environmental and social harm arising from aviation through a balanced programme of progressive introduction of improved technology, better operational practice, and demand management.
- Although Government should act quickly and independently where feasible, we recognise that many of the best options to reduce the environmental and social harm caused by aviation will require international cooperation. The Government should adopt a leading and active role in securing early international action, particularly within the European Union, giving tangible and direct support to the development of radical and innovative solutions.

### Relevant EU legislation

The EU 6<sup>th</sup> Environmental Action Programme aims "to achieve reduction of the

number of people regularly affected by long-term high noise levels from an estimated 100 million people in the year 2000, by around 10% in 2010 and by 20% in 2020”.

The EU Environmental Noise Directive 2002/49/EC (END) sets out to avoid, prevent or reduce on a prioritised basis the harmful effects, including annoyance, due to exposure to environmental noise. By July 2008 noise action plans should be in place for managing noise at airports including Heathrow.

The EU Framework Directive on ambient air quality assessment and management (96/62EC) and its four ‘daughter’ directives sets legally binding limit values for many air pollutants, including nitrogen dioxide and particulate matter (PM<sub>10</sub>). The Directive and the first 3 ‘daughters’ will be replaced with a new EU Air Quality Directive during 2008.

## **Section 2 - Answers to Specific Consultation Questions**

### ***Section A.3 Maximum Take Off Weight:***

*1. What would be the simplest and most transparent method of using maximum take-off weight: banding or straight calculation of either the constant MTOW or some function of MTOW?*

We believe the MTOW should be one of the main criteria for levying the new Air Duty, and that a number of MTOW bands would be the simplest and most appropriate system.

*2. Are there any possible distortions/problems caused by using MTOW?*

There may be some problems where large/ heavy aircraft are more fuel efficient, cleaner and/ or quieter than smaller, older models. We do not believe that this is an insuperable problem at the present time, but does demonstrate the need to build in a review process to the new duty system.

*3. What do you think the environmental benefits of using MTOW would be?*

MTOW is an important criterion to balance the impact of a ‘per aircraft’ duty. Larger aircraft are generally dirtier and noisier per flight than smaller aircraft, and the MTOW factor helps to reflect this in the duty system in a far less crude fashion than the current air passenger duty system.

*4. How well do you think that using MTOW as the basis for the duty helps the Government achieve its objectives?*

As stated above, we believe MTOW would be one suitable balancing factor to represent the climate change, air quality and noise impacts of larger aircraft, therefore helping the Government achieve their objectives in these policy areas.

### ***Section A.4 NO<sub>x</sub> emissions in the landing and take-off cycle:***

*5. What would be the simplest method of using NO<sub>x</sub> emissions: banding or straight calculation of either the constant NO<sub>x</sub> emissions or some function of NO<sub>x</sub> emissions?*

We would favour a banded system based on the landing/takeoff cycle. This would need to incorporate the ability for aircraft to be reassessed if new engines were fitted.

*6. Are there any possible distortions/problems caused by using NO<sub>x</sub> emissions in the landing and take-off cycle as the basis for the duty?*

NO<sub>x</sub> emissions in the landing and take off stage are strongly related to the actual air quality impacts on a flight, as NO<sub>x</sub> is of greatest concern when it is emitted at low

altitude in the vicinity of airports. We are, however, concerned by some evidence that airlines are raising engine pressures to improve fuel economy – this leads to higher NO<sub>x</sub> emissions but does not affect the rated NO<sub>x</sub> performance of the aircraft.

**Section A.5 - CO<sub>2</sub> emissions in the landing and take-off cycle:**

*Questions 8, 9, 10 - CO<sub>2</sub> emissions in the landing and take-off cycle*

We do not believe that CO<sub>2</sub> emissions in the landing and take-off cycle should be used to levy fuel duty. Whilst we accept that this criterion has a reasonable fit with per km CO<sub>2</sub> emissions it neither reflects the total CO<sub>2</sub> emissions from the flight, or local environmental impact (noise and NO<sub>x</sub>) in the vicinity of the airport. As these (climate change, noise and air quality) are the key policy areas where the new duty system aims to achieve benefits we do not think this criteria is appropriate. CO<sub>2</sub> emissions would be best addressed by full carbon pricing.

**Section A.6 - Other basis questions:**

*11. Is there another aircraft measure that would be better for aviation duty than the three options described above?*

Yes. Emissions of CO<sub>2</sub>, NO<sub>x</sub> and noise are all strongly linked to the age of the aircraft, or, more specifically the age of the aircraft's engines. Linking duty paid to the age of the aircraft, and the aircraft's engines, would reward airlines that invested in newer, quieter, cleaner aircraft and provide a strong incentive for airlines with older fleets to invest in more modern aircraft. This would not be the case for a system based simply on maximum take of weight and distance, the Government's preferred option.

Aircraft age as a duty criteria is independent of aircraft size, however this would conceivably be covered by the MTOW criteria.

**Section A.7 - The Government recommends that the distance factor used in the calculation of aviation duty is determined by placing destinations into three geographical bands. The Government welcomes views on this recommendation, and, in particular would be interested in answers to the questions below:**

Environmental Protection UK strongly disagrees with the concept of a distance based duty system. Aviation's place within a sustainable transport system should be to transport passengers and freight where lower carbon surface transport options are not available, and the duty system should therefore encourage domestic and near continental travellers to use the lowest carbon option – rail. A purely distance-based charge would levy the lowest rates of duty on highly loaded short haul flights (typically by low cost carriers who have been growing demand and carbon fastest), which in many cases compete directly with domestic and continental rail.

In addition to this, a crudely stepped distance based duty system could penalise some destinations unfairly relative to others with similar carbon impacts.

*16. What are the possible distortions/problems caused by using distance?*

As discussed above, we are concerned that a distance based charge will levy the lowest duty on highly loaded short haul flights, in effect encouraging modal shift from rail (low carbon) to air (high carbon). If Government policy is to manage and reduce CO<sub>2</sub> emissions from transport then, where modal options exist, fiscal policy should encourage travellers towards the mode with the lowest CO<sub>2</sub> emissions per kilometre. However, under the proposed duty system the most lightly taxed flights would be heavily loaded short haul flights that on many routes compete with domestic and continental rail.

In addition to this the local impact of aviation on air quality and noise in the vicinity of airports is affected by the number of aircraft taking off and landing, rather than the distance the aircraft is travelling. A system that charges a lower duty for shorter distance flights, and may actually encourage short haul flights, is therefore not beneficial to local noise and air quality impacts.

*19. Are there other alternatives for including a distance factor, not already covered?*  
We would like to see further modelling work by the Treasury and/ or the Department for Transport on the effect of the price sensitivity of domestic and near continent travel choices, and the likely modal shift effects of the new duty system. If this modelling showed significant modal price sensitivity on domestic flights we would support a higher duty charge for domestic flights.

**Section A.8 - The Government welcomes views on the proposal that a 5.7 tonnes de minimis limit for aviation duty is applied, with all fixed wing aircraft below this level subject to fuel duty. In particular, responses would be welcome on the questions below:**

*20. Do you agree that a de minimis limit based on the weight of an aircraft a suitable measure?*

Yes

*21. Is 5.7 tonnes a suitable level at which to set a de minimis limit?*

Yes, this is a sensible limit and, as it is in current use, would minimize confusion and disruption

*24. Do you agree that all helicopters should be placed within the fuel duty regime rather than the aviation duty regime?*

Yes

### **Section 3 – Contact Us**

If you require any further information on the views expressed in this response please contact:

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