

# Aviation duty: a consultation

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January 2008



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# INTRODUCTION

**1.1** At Pre-Budget Report 2007, the Government announced that it intended to replace air passenger duty with a duty payable per plane, rather than per passenger. This reform will take place on 1 November 2009, and has the objective of sending better environmental signals, and ensuring that aviation makes a greater contribution to covering its environmental costs, while ensuring that a fair level of revenue continues to be raised from the sector in order to support public services. This consultation sets out options on the detailed design of the new per plane duty, puts forward a number of specific proposals for how this would operate, and seeks the views of stakeholders in relation to these proposals.

## The challenge of climate change

**1.2** Climate change is one of the most pressing challenges facing the world today. *Stern Review of the Economics of Climate Change*<sup>1</sup> estimated that temperature increases associated with current business as usual emissions could lead to damages equivalent to as much as 5-20 per cent of global GDP, and the latest science shows that climate change is a bigger and more urgent challenge than had previously been understood. Projected levels of warming will have a variety of impacts around the world, affecting the basics of life – access to water, food production, health and the environment – both in the UK and elsewhere.

**1.3** However, the *Stern Review* concluded that if the world takes action now, and with the right policies in place, stabilisation of greenhouse gas concentrations at a level that avoids the most dangerous impacts of climate change could cost around 1 per cent of global GDP. That is a significant impact – but it is clearly less than the costs of not taking action.

**1.4** Climate change is a global problem that can only be solved through collective international action. The global community must collectively agree and deliver a plan to reduce greenhouse gas emissions, in order to meet the ultimate objective of stabilising greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous interference with the climate system. The UK, working closely with EU and other international partners, has made a significant contribution to the progress of international discussions in recent years. The recent United Nations Framework Convention on Climate Change (UNFCCC) discussions at Bali in December 2007 were an important step forward, agreeing a roadmap for achieving a global climate deal by the end of 2009.

**1.5** The UK is committed to taking action domestically and as part of the EU. The EU has agreed an ambitious set of targets on climate change and energy, and the proposals published by the European Commission on 23 January represent an important step by the EU, which the UK strongly supports.

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<sup>1</sup> The Stern Review on the Economics of Climate Change, commissioned by the Chancellor of the Exchequer in July 2005, was set up to understand more comprehensively the nature of the economic challenges of climate change and how they can be met, both in the UK and globally. Available at [www.hm-treasury.gov.uk](http://www.hm-treasury.gov.uk)

**1.6** The Government is also taking action domestically, in order to reduce UK emissions and to demonstrate that a healthy low carbon economy is possible and affordable. *Moving to a global low carbon economy: implementing the Stern Review*<sup>2</sup>, published alongside the 2007 Comprehensive Spending Review, set out the Government's approach at international and domestic level to the challenges of climate change. Further information can also be found in *Towards a Sustainable Transport System*<sup>3</sup>, the Department for Transport's response to both the *Stern Review of the Economics of Climate Change*<sup>4</sup> and the *Eddington Transport study*<sup>5</sup>

**1.7** The UK has made significant progress in reducing its greenhouse gas emissions. Greenhouse gas emissions from activity within the UK's borders fell by around 15 per cent between 1990 and 2006<sup>6</sup>, or around 20 per cent when emissions credits purchased through trading in the EU Emissions Trading Scheme (EU ETS) are included. The UK is therefore already meeting its target under the Kyoto Protocol of a 12.5 per cent reduction in greenhouse gas emissions, from 1990, by 2012, taking emissions trading into account. As a result of the policies and measures the Government has introduced, UK emissions are projecting to be about 23 per cent below 1990 levels by 2010, nearly double our Kyoto target.

**1.8** However, continued efforts will be necessary if the UK is to make its contribution to the global reductions needed to avoid dangerous climate change. The Government is taking steps to provide a flexible and credible framework within which this can take place, as well as the right information and support to businesses, the public sector, and individuals and families, in order that all can make their contribution. The Climate Change Bill, currently being debated in Parliament, is an essential part of that effort. It will put the UK long-term target of cutting CO<sub>2</sub> emissions by at least 60 per cent by 2050 and 26-32 per cent by 2020, from 1990 levels, into legislation, introduce five year 'carbon budgets' up to 2050 and beyond, and establish a new independent body, the Committee on Climate Change, to advise the Government on the level of carbon budgets. The Government also intends to review the 2050 target, which is already stronger than most other countries, based on advice from the Committee on whether it should be even stronger.

## The role of aviation

**1.9** Air travel accounts for a growing share of the UK's carbon dioxide: in 2005 it was estimated to account for 6.3 per cent of total carbon dioxide emissions. This is forecast to grow to around 21 per cent<sup>7</sup> of the UK greenhouse gas emissions in 2050<sup>8</sup>. However, aviation's climate change impacts are greater than its carbon dioxide emissions alone. See Box 1.1 for details of how aviation contributes to climate change.

**1.10** At present, domestic aviation is included within the system of national greenhouse gas inventories on which Kyoto greenhouse gas reduction targets, and the Climate Change Bill's targets, are based. However, emissions from international

<sup>2</sup> [www.hm-treasury.gov.uk](http://www.hm-treasury.gov.uk)

<sup>3</sup> [www.dft.gov.uk](http://www.dft.gov.uk)

<sup>4</sup> [www.hm-treasury.gov.uk](http://www.hm-treasury.gov.uk)

<sup>5</sup> [www.dft.gov.uk](http://www.dft.gov.uk)

<sup>6</sup> *Provisional 2006 UK climate change sustainable development indicator and final 2005 air pollutant emissions*  
<http://www.defra.gov.uk/news/2007/070329a.htm>

<sup>7</sup> This figure does not take into account the effects of radiative forcing which gives a figure of 29 per cent in 2050.

<sup>8</sup> *UK Air Passenger Demand and CO<sub>2</sub> Forecasts*, Department for Transport, 2007, pp.138-9

aviation (as with international maritime transport) are not included because there is no agreed methodology as to how these should be assigned to individual countries.

**Box 1.1: How aviation contributes to climate change**

Aviation emissions arising from the combustion of kerosene include:

- carbon dioxide (CO<sub>2</sub>);
- water vapour (H<sub>2</sub>O - which leads to the formation of contrails and cirrus cloud at altitude);
- nitric oxide and nitrogen dioxide (or NO<sub>x</sub>, which forms ozone, a greenhouse gas, at altitude);
- particulates (soot and sulphate particles); and
- other compounds including sulphur oxides, carbon monoxide, hydrocarbons and radicals such as hydroxyl.

Aviation contributed 6.3 per cent of total UK CO<sub>2</sub> emissions (including international shipping and aviation) in 2005. Aviation's contribution is projected to grow to around 21 per cent<sup>9</sup> in 2050.<sup>10</sup>

Understanding of the impacts of carbon dioxide emissions is relatively good. For other emissions there are greater uncertainties, although the impacts of NO<sub>x</sub> emissions are better understood than other non- CO<sub>2</sub> emissions. These 'radiative forcing' impacts were estimated by the Intergovernmental Panel on Climate Change (IPCC) in 1999 to be 2-4 times greater than that from carbon dioxide alone (excluding cirrus cloud enhancement). More recently the total radiative impacts were estimated, by the EC TRADEOFF project, to be approximately twice those of CO<sub>2</sub>, once again excluding cirrus. Separately, the upper limits of cirrus impacts have recently been estimated to be potentially twice those estimated by the IPCC in 1999.<sup>11</sup>

**1.11** The Government remains committed to supporting the sustainable growth of the aviation industry, as it makes an important contribution to the UK economy. It is recognised that the industry directly supports around 200,000 jobs, and indirectly up to three times as many. One fifth of all international air passengers in the world are on flights to or from a UK airport, and in 2005 some 228 million passengers passed through UK airports. All the evidence suggests that the growth in the popularity and importance of air travel is set to continue over the next 30 years.

**1.12** Therefore, the Government's long-term strategy, as set out in the 2003 White Paper, *The Future of Air Transport*, which is supported by the Stern Review conclusions, is to enable the aviation industry to expand in an environmentally sustainable way, ensuring that it pays the external costs that its activities impose on society at large – in other words, that the price of air travel reflects its environmental and social impacts.

<sup>9</sup> This figure does not take into account the effects of radiative forcing which gives a figure of 29 per cent in 2050.

<sup>10</sup> *UK Air Passenger Demand and CO<sub>2</sub> Forecasts*, Department for Transport, 2007, pp138-9

<sup>11</sup> *ibid*

**1.13** Aviation's environmental impacts are not restricted to climate change but include other impacts such as noise. While the proposals in this consultation concentrate primarily on addressing the industry's climate change impacts, the Government equally has commitments to ensure that it pays for its full environmental costs. For example the economic cost of aircraft noise will be calculated in the final Impact Assessment for adding capacity at Heathrow. The Department for Transport is running a formal consultation entitled *Adding capacity at Heathrow*<sup>12</sup>, which will close on the 27 February 2008.

**1.14** One way of ensuring that international aviation pays its external costs would be to allow the taxation of fuel that is used for international flights. However, Article 24 of the Chicago Convention on International Civil Aviation – the treaty that provides the framework for the operation of international civil aviation – prohibits the imposition of taxes or charges on fuel kept on board aircraft and consumed on international flights and, by extension under the provisions of most bilateral air services agreements, uplifted fuel. Most of the nations of the world, including the EU member states, are parties to this treaty, and its provisions form binding international law and are reflected in the EU's Energy Products Directive. The Government believes that, while a necessary piece of legislation in 1944, when the aviation industry was starting to develop, Article 24 of the Convention is now anomalous – and the UK therefore continues to press at the international level for changes to this provision.

**1.15** In the absence of a truly global solution at present, the Government is continuing to press for the inclusion of aviation in the EU Emissions Trading Scheme (ETS) as soon as possible, and has made significant progress with this. However, the Government has always held that there is, in addition, a role for a domestic measure which supports the EU-wide mechanism, and which ensures that the sector continues to contribute fairly and equitably towards the funding of public services.

**1.16** Since 1994 the domestic measure that has been used by the Government is air passenger duty (APD), which has played a valuable role in encouraging behavioural change and reducing emissions from aviation. At Pre-Budget Report 2007, however, the Government decided that it was necessary to go further in order to ensure that aviation taxation sent better environmental signals, and made a greater contribution to covering its environmental costs, while still ensuring that a fair level of revenue continues to be raised from the sector in order to support public services. For these reasons, it was announced that air passenger duty would be replaced by a per plane duty – or aviation duty - rather than a per passenger duty, from 1 November 2009.

## Principles of a per plane duty

**1.17** In developing a per plane duty to replace APD, the Government will be guided by a number of principles. These are, in so far as they are practically possible to:

- ensure the industry makes a greater contribution towards its environmental costs and to ensure that the aviation sector continues to contribute fairly and equitably towards the funding of public services;
- have a fairer duty more in line with the environmental impacts of flights, including the distance travelled, and which takes account of any social or economic impacts including market distortions;

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<sup>12</sup> [www.dft.gov.uk](http://www.dft.gov.uk)

- provide incentives for the more efficient use of planes by taxing similarly sized aircraft the same, no matter how full the plane;
- as a starting assumption, apply aviation duty to all flights taking off from the UK, as all aircraft produce emissions;
- have a simple, transparent and coherent duty which imposes minimal administrative burdens on industry and Government and minimises the capacity for non-compliance and for artificial tax-motivated behaviour which does not deliver environmental benefits; and
- ensure that it is compatible with the UK's commitments under international law, including the Chicago Convention, bilateral agreements and EU law.

## Objectives of this consultation

**1.18** This consultation seeks views on the details of the new per plane duty, to ensure that it is successful in reflecting these principles. The document covers a number of issues relating to the potential operation of a new aviation duty, including: the basis of the duty, the relationship to distance travelled, the impact on the freight industry, the impact on transit/transfer passengers, administrative details and the case for any exemptions. The consultation also considers the role of fuel duty in the domestic aviation sector, in areas where that form of duty may prove more effective or deregulatory than applying aviation duty. The consultation is accompanied by an Impact Assessment in Annex B; the two documents should be considered in conjunction.

**1.19** Since the Pre-Budget Report the Government has undertaken preliminary discussions with a number of industry bodies as well as individual organisations to inform this consultation, taking account of the diverse nature of the aviation industry. A list of these organisations is included at Annex D. The Government recognises that there is a wide and diverse range of both aircraft flown and the purposes for which they are flown. The Government encourages industry bodies, organisations, companies and individuals from all parts of this sector to bring their knowledge and ideas to the consultation as well as those with an interest in the important issue of aviation's impact on the environment.

**1.20** There have also been recent policy announcements on APD rates applying to business class only airlines and on the arrangements for charging fuel duty on private pleasure fliers, which will apply from 1 November 2008. These issues are outside the scope of this document. For further information on either of these issues, please visit [www.hmrc.gov.uk](http://www.hmrc.gov.uk).

## Responding to this consultation

**1.21** The Government would welcome views on any of the issues covered in this paper – in particular, the Government would be grateful for responses to the 49 questions that appear at various points in the text and are summarised at Annex A. Details on how to respond to the consultation are set out in Chapter 8, including an explanation of the approach to consultation responses under freedom of information.

## Key Stages

**1.22** This formal consultation is being published on 31 January 2008 and will run for twelve weeks. Box 1.2 sets out the overall timetable for the introduction of aviation duty.

### **Box 1.2: Consultation Process and Timing**

- Formal consultation issued - 31 January 2008
- Formal consultation closes – 24 April 2008
- Aviation duty implemented for all flights – 1 November 2009

# 2

## THE BASIS OF THE DUTY

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**2.1** The first factor to be determined in the design of a new aviation duty will be the basis of the duty. This will consist of both a measure that reflects the environmental impact of the aircraft, and a measure of the distance travelled on the flight in question. This chapter sets out issues surrounding the selection of these measures, and concludes that the lead option should be to use the Maximum Take-Off Weight of the aircraft, and a banded system for defining the distance travelled. This document does not, however, consider the precise rates that would be applied to the duty basis or distance factor: these will be determined once the basis of the duty is confirmed.

**Requirements for the duty basis** **2.2** Before considering the options for the basis of the duty, it is necessary to set out some of the practical requirements that the duty is expected to meet. As a starting point, all flights, including empty flights, will be charged. This is intended to include freight-only flights, although the Government is seeking views on the impact of the duty on freight – see Chapter 5 for details. There may also be the case for social or economic exemptions – see Chapter 4 for details of this. The duty will apply to all flights taking off from the UK, with the duty point being the point of take-off. The duty will be calculated on a per plane basis, unlike APD which is per passenger based. However, like APD, whether and how this is passed onto passengers will be a commercial decision to be made by the industry.

**2.3** The Government believes that the basis of the duty should be an objective and uniform measure or combination of measures of an aircraft and/or an aircraft's flight – and will look to use existing recording or registration schemes wherever possible, and the potential administrative burden posed by more complex types of scheme will be taken into account.

## AIRCRAFT MEASURE: OPTIONS

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**2.4** This section presents three options that provide reasonable proxies of the environmental impact of aircraft, and could therefore be used to calculate aviation duty. In considering this, the Government's aim has been to find a measure that reflects the emissions of a flight, while taking into consideration the UK's obligations under the Chicago Convention. This means that charges cannot be levied directly on aviation fuel used for international flight or indirectly in a way that is too closely related to the quantity of fuel used. The UK considers international law to be anomalous in this respect and will continue to press at international level to change the law – however, the design of aviation duty will reflect these requirements as they stand.

**2.5** The Government has considered three main options for the basis: Maximum Take-Off Weight, NO<sub>x</sub> emissions during landing and take-off (LTO) and CO<sub>2</sub> emissions during LTO. These are set out in detail below. The Government's preference at this stage is to use Maximum Take-Off Weight as the duty base, for the reasons set out below. However, the Government will welcome responses to this consultation suggesting measures, or combinations of measures, that are not considered here but which meet the criteria set out above.

### Option A: Maximum Take-Off Weight

**2.6** Maximum Take-Off Weight (MTOW) is the heaviest weight at which an aircraft has been shown to meet all the airworthiness requirements applicable to it. MTOW is affected by the design of the airframe, engine type and power and drive type (e.g. fixed propeller vs. turbofan) and its calculations are all-inclusive, representing the sum of the weights of the airframe, fuel, passengers, cargo, and personnel. Every aircraft has a MTOW certified by the manufacturer as well as a MTOW registered by the operator. It is the Government's intention to use the manufacturer's MTOW to ensure consistency across aircraft. MTOW is currently used by Eurocontrol in determining air navigation service charges.

**2.7** There are two main reasons for proposing MTOW as our lead option:

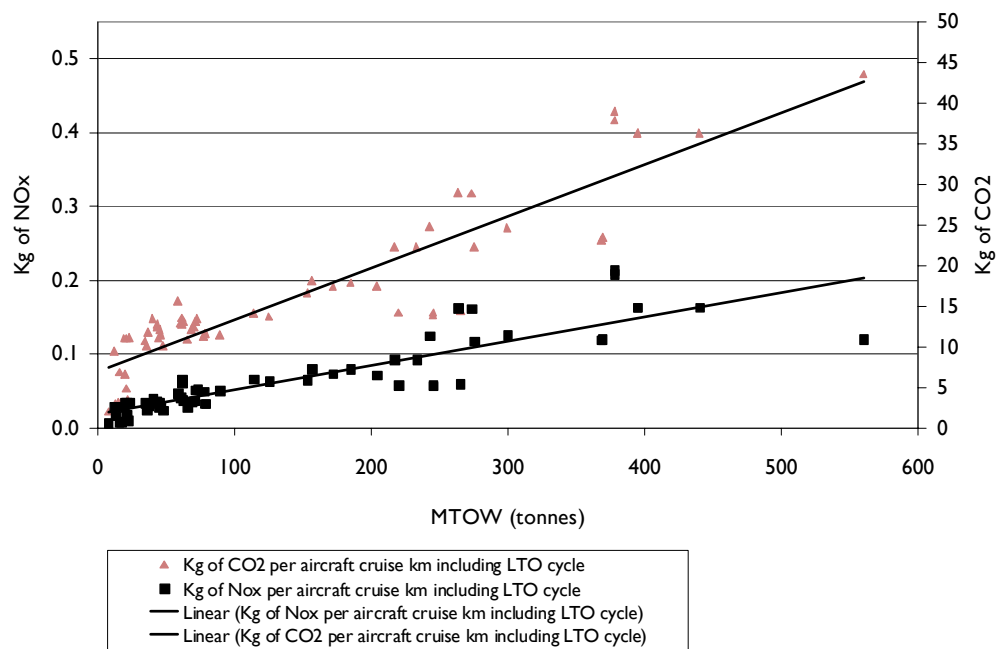
- MTOW is a standard measure of an aircraft that is recorded by all manufacturers and operators. This measure is already in use for determining some airport charges and would therefore provide a minimal administrative burden to business; and
- MTOW provides a reasonable proxy for the environmental impact of a flight, as can be seen in Chart 2.1 overleaf. This shows the correlation of CO<sub>2</sub> and NO<sub>x</sub> emissions per aircraft cruise km including the landing and take-off cycle (LTO) against MTOW for average distances travelled. This analysis has shown a reasonably good relationship between MTOW and emissions per cruise km. A list of aircraft used in this analysis, and brief methodology can be found in Annex C.

**2.8** For these reasons, MTOW is the Government’s preference to form the basis of aviation duty. MTOW could be used to calculate the duty in several different ways, and the Government is seeking views on which option is preferable. Alternatives include:

- as a straight calculation of MTOW multiplied by a rate per tonne;
- some more complex continuous function of MTOW; or
- by placing aircraft into discrete weight “bands” based on MTOW.

**2.9** The Government recognises that new technology is producing heavier aircraft with lower emissions and that in some cases there may be a lower level of correlation between MTOW and emissions. For example there are some exceptions where aircraft are more fuel efficient despite their size. Responses on this point, and further suggestions for how MTOW can best be used to reflect environmental costs, will be welcomed.

**Chart 2.1: Correlation between Maximum Take Off Weight (MTOW) and NO<sub>x</sub> and CO<sub>2</sub> emissions (in kg) at aircraft cruise km including within the landing and take off cycles**



Source: CAA 2005 and CORINAIR 2005

## Other possible measures

**2.10** While the Government believes that MTOW provides a robust basis for the duty, it is recognised that there may be a case for using a measure that is more directly related to environmental costs, in a way which is compatible with the legal restrictions on the direct or indirect taxation of the quantity of fuel used on international flights. Detail on how emissions arising from aircraft that can influence climate change are set out in Chapter 1, and this section considers two particular measures that relate more closely to these costs.

### Option b) NO<sub>x</sub> emissions in the landing and take-off cycle

**2.11** As discussed in Box 1.1, nitric oxide and nitrogen dioxide are together termed NO<sub>x</sub> and have a climate warming effect when emitted at altitude. NO<sub>x</sub> affects the creation and depletion of ozone and adds to the radiative forcing of greenhouse gases. NO<sub>x</sub> can also cause local problems such as acidification and ozone formation in the lower atmosphere. The environmental impact of aviation's NO<sub>x</sub> emissions will not be included within the scope of the EU Emissions Trading Scheme, and so basing aviation duty on this measure would provide a clear additional incentive to reduce these emissions. Sweden has used NO<sub>x</sub> emissions in the landing and take-off cycle (LTO) as the basis of an environmental charge since 1998.

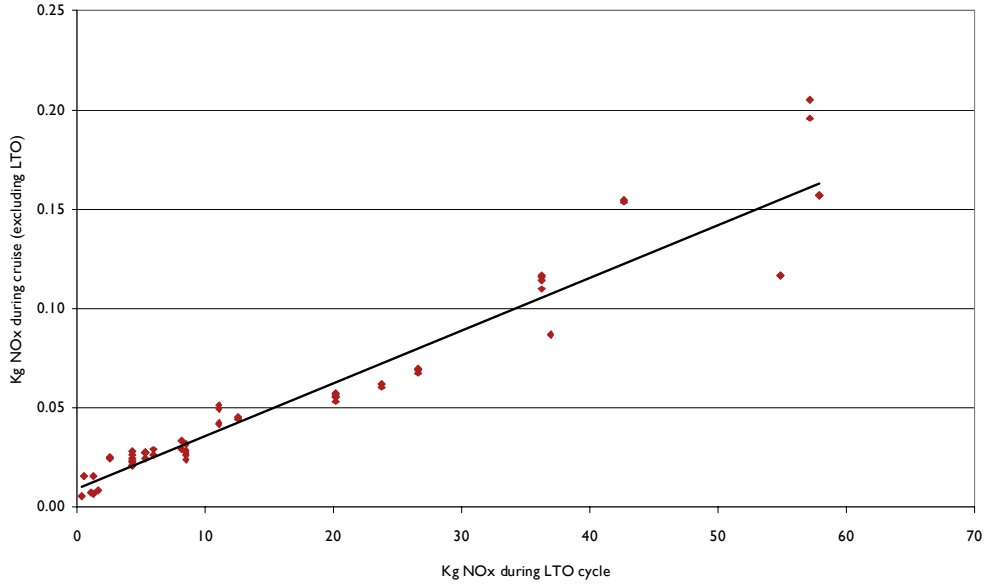
**2.12** Charts 2.2 to 2.4 below, show a reasonably good correlation between NO<sub>x</sub> in LTO and NO<sub>x</sub> per cruise km, NO<sub>x</sub> in LTO and CO<sub>2</sub> per cruise km and NO<sub>x</sub> and CO<sub>2</sub> in LTO. This data is taken from the European Environment Agency's CORINAIR data sets. A list of aircraft used in this analysis, and methodology can be found in Annex C.

**2.13** NO<sub>x</sub> emissions in LTO could be used in one of a number of ways. For instance:

- as a straight calculation of NO<sub>x</sub> emitted multiplied by a fixed rate;
- as another continuous function of NO<sub>x</sub>; or
- by placing aircraft into discrete "bands" based on NO<sub>x</sub>.

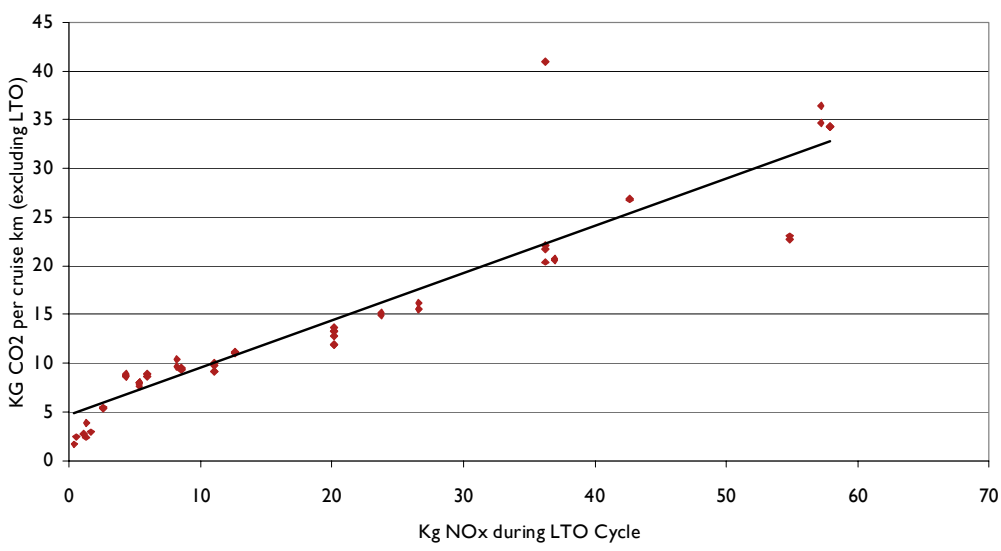
**2.14** However, while NO<sub>x</sub> emissions in LTO have been shown to provide a reasonably good correlation to emissions en route, in considering any emissions basis for the duty, the Government would need to be assured that the data were robust and comprehensive enough to base the duty on. CORINAIR data represents an indicative sample of 62 representative aircraft types, however, the Government believes that it would be necessary to have a more comprehensive set of data – covering all aircraft types - in order for this to form the basis of a duty. Work is underway internationally to produce NO<sub>x</sub> data at LTO for all aircraft through the Committee on Aviation Environmental Protection (CAEP). Until this data set is finalised, the Government is not convinced that the available data is comprehensive enough, and therefore NO<sub>x</sub> emissions in LTO are not the Government's preference at this stage.

**Chart 2.2: Correlation between NOx in the Landing and Take-Off Cycle and NOx per cruise km**



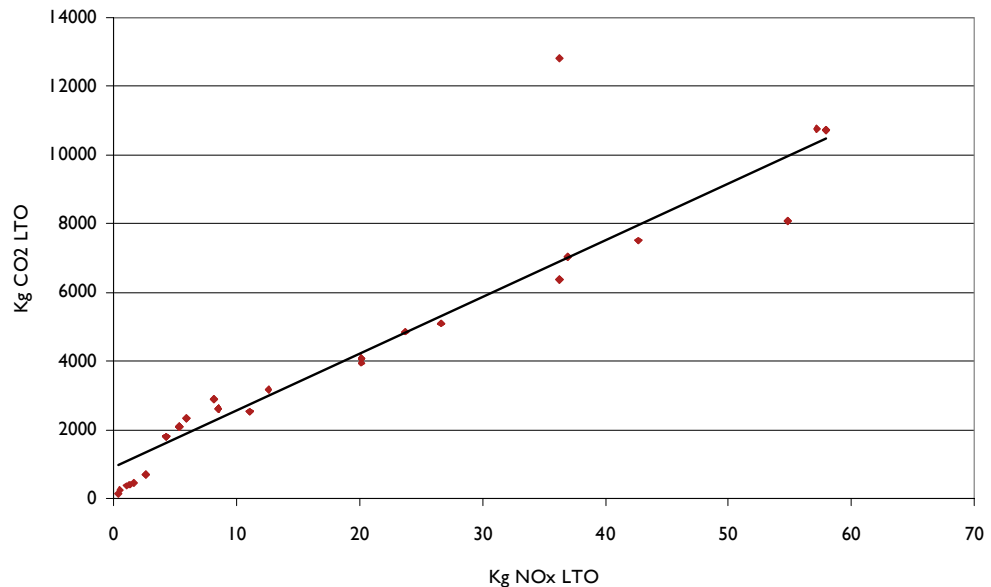
Source: CAA, 2005 and CORINAIR, 2005

**Chart 2.3: Correlation between NOx during the Landing and Take-Off Cycle against CO2 per cruise km**



Source: CAA, 2005 and CORINAIR, 2005

**Chart 2.4: Correlation between NO<sub>x</sub> and CO<sub>2</sub> emissions during the Landing and Take-Off Cycle**



Source: CAA, 2005 and CORINAIR, 2005

### Option c) CO<sub>2</sub> emissions in landing and take-off cycle

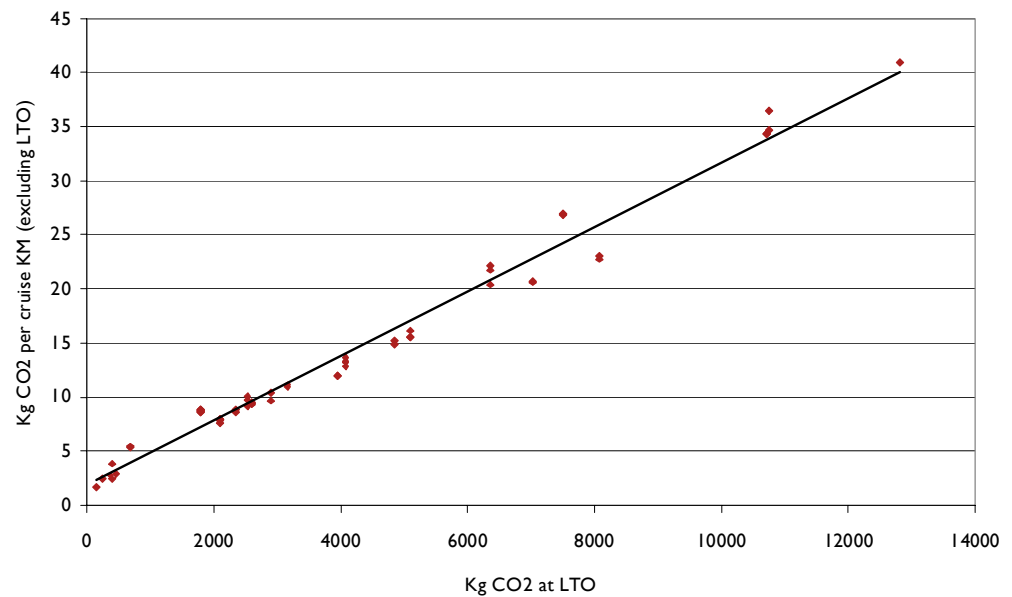
**2.15** CO<sub>2</sub> is the principal greenhouse gas emitted by aircraft that causes climate change. The ideal method of accounting for CO<sub>2</sub> emissions would be to charge fuel duty on aviation fuel, as emissions are directly related to the amount of fuel burnt during a flight. The UK is, however, prevented from doing this by international law. Nonetheless, the Government could potentially base the duty on CO<sub>2</sub> emitted during the landing and take-off cycle (LTO). Chart 2.5 below indicates a very good degree of correlation between CO<sub>2</sub> emissions in LTO and CO<sub>2</sub> emissions en route.

**2.16** CO<sub>2</sub> emissions in LTO could be used to calculate the duty in several different ways. For instance:

- as a straight calculation of CO<sub>2</sub> emitted in LTO multiplied by a fixed rate;
- another continuous function of CO<sub>2</sub> in the landing and take-off cycle; or
- by placing aircraft into discrete “bands” based on CO<sub>2</sub>.

**2.17** The analysis of 62 representative types of aircraft show that CO<sub>2</sub> emissions in LTO provide a reasonably good correlation to emissions en route. However, in considering any emissions basis for the duty, the Government would need to be assured that the data used was robust and comprehensive enough. As data is not yet known to exist on CO<sub>2</sub> emissions in the LTO for all aircraft, this measure is not the Government's preference, further views would be welcome on the issue of data.

**Chart 2.5: Correlation between CO<sub>2</sub> during the Landing and Take-Off Cycle and emission per cruise km (excluding Landing and Take Off Cycle)**



Source: CAA, 2005 and CORINAIR, 2005

**The lead option: MTOW**

**2.18** Having considered the three options set out above, MTOW remains the Government’s lead option for the aircraft measure that will be combined with a distance factor to determine the basis of aviation duty. While suggestions on other options will be welcome, it is vital that the measure that is used can be determined in a uniform manner both domestically and internationally, and independently assured. This is the case for MTOW, but at present it does not appear to be the case for emissions data.

**QUESTIONS: AIRCRAFT FACTOR**

**2.19** The Government welcomes views on aircraft measure options that have been set out, and in particular would be interested in responses to the questions below.

**2.20** 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?
2. Are there any possible distortions/problems caused by using MTOW?
3. What do you think the environmental benefits of using MTOW would be?
4. How well do you think that using MTOW as the basis for the duty helps the Government achieve its objectives?

**2.21** NOx 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?
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?
7. What would be the best source of robust data on NO<sub>x</sub> emissions in the landing and take-off cycle?

#### **2.22** CO<sub>2</sub> emissions in the landing and take-off cycle:

8. What would be the simplest method of using CO<sub>2</sub> emissions in the landing and take-off cycle: banding or straight calculation of either the constant CO<sub>2</sub> emissions or some function of CO<sub>2</sub> emissions?
9. Are there any possible distortions/problems caused by using CO<sub>2</sub> emissions in the landing and take-off cycle as the basis for the duty?
10. What would be the best source of robust data on CO<sub>2</sub> emissions in the landing and take-off cycle?

#### **2.23** Other basis questions:

11. Is there another aircraft measure that would be better for aviation duty than the three options described above?
12. The Government would also welcome views on the extent to which the new aviation duty could play a role in covering other environmental costs as well as incentivise airlines to use quieter aircraft.

## **DISTANCE FACTOR**

**2.24** One of the key objectives behind the reform of aviation taxation is to make it better correlated to distance travelled, in order to align it more closely with actual environmental costs. The Government therefore believes that a criterion based on distance should be used in conjunction with an aircraft measure in order to determine the basis of aviation duty.

**2.25** It is not straightforward to use the actual distance flown by an aircraft as the basis of the duty. Each flight may deviate from the most direct route planned for a number of reasons including airspace permissions, weather, and time spent in holding patterns. The Government has therefore considered options for integrating a representative distance measure – and the two principal alternatives – great circle distance and banded distance - are set out below.

**2.26** Air passenger duty (APD) is currently charged based on destination and distinguishes between European Economic Area (EEA) and non-EEA destinations.<sup>1</sup> While APD is charged on the destination of the passenger, however, aviation duty would need to be charged based on the first destination of the aircraft.

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<sup>1</sup> EEA destinations comprise all EU member states, Norway and Iceland and countries applying to join the EU. The lower rates of APD also apply to those in the European Common Aviation Area, - Albania, Bosnia and Herzegovina, Croatia, the Former Yugoslav Republic of Macedonia, Kosovo under the Interim Administrativeistraton of the United Nations, Montenegro and Serbia.

**Option a) Great circle distance** **2.27** The closest representative measure to actual distance travelled by an aircraft is great circle distance – the shortest distance between landing and take-off points measured along a path on the surface of the globe. This is commonly used as a navigational method. Examples of approximate great circle distances are:

- London – Paris – 210 miles
- Edinburgh – New York – 3,250 miles
- Manchester – Dubai – 3,520 miles
- Birmingham – Cape Town – 6,075 miles
- London – Singapore – 6,750 miles

**2.28** While this is a transparent method, the above figures show how it could potentially result in large differentials in the duty between short and long haul flights. Having too great a differential could potentially lead to market distortion through both operator and passenger changes in behaviour, for example through passengers choosing to fly to a destination through an intermediate hub.

**Option b) Banding of distances** **2.29** Air passenger duty is charged based on destination and distinguishes between European and non-European destinations.<sup>2</sup> In light of the difficulties involving great circle distance, it makes sense to consider a version of this system for aviation duty. This could consist of the current EEA/non-EEA split or could be extended to include a number of different bandings. Banding would be a less exact measure of the actual distance travelled by an aircraft, however, it would reduce the potential for market distortions and provide significantly increased simplicity. The Government is therefore inclined to use a banding system in the design of aviation duty.

**2.30** In developing a banded system, it is recognised that although some aircraft have a longer available range, in practice flights are usually no more than 6,750 miles. The Government proposes a three-banded system comprising:

- Band A – European Economic Area<sup>3</sup>
- Band B – less than 3,000 miles from London (non-EEA destinations)
- Band C – more than 3,000 miles from London

**2.31** Annex E provides a list of the countries that would fall within each of these bands. In all cases, distance from London to the capital city has been used to determine the relevant band for the country as a whole.

## QUESTIONS: DISTANCE FACTOR

**2.32** 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:

<sup>2</sup> As above.

<sup>3</sup> EEA destinations comprise all EU member states, Norway and Iceland and countries applying to join the EU. The lower rates of APD also apply to those in the European Common Aviation Area, - Albania, Bosnia and Herzegovina, Croatia, the Former Yugoslav Republic of Macedonia, Kosovo under the Interim Administrativeistraton of the United Nations, Montenegro and Serbia.

13. Do you agree that banding is the most appropriate measure?
14. Do you agree with the banding system that the Government has suggested?
15. How well does a banded approach to distance achieve environmental objectives, given the need to avoid a perverse incentive to fly via intermediate hubs?
16. What are the possible distortions/problems caused by using distance?
17. What would the advantages/disadvantages of using great circle distance be?
18. How would you combine distance with other criteria?
19. Are there other alternatives for including a distance factor, not already covered?

## WORKED EXAMPLES

**2.33** To illustrate how the new aviation duty might work, boxes 2.1 and 2.2 set out worked examples of how the Government’s lead option for the basis of aviation duty would work in practice in order to meet the objectives for the duty.

### Box 2.1: Example 1 – Uneven loading factors

The following example illustrates how MTOW, combined with a system of distance banding, would work to ensure that two identical aircraft carrying different numbers of passengers to the same destination would pay the same duty. Given that each of these flights emit roughly the same amount of emissions, this ensures that both flights account for their environmental costs equally. An aircraft carrying only freight would be treated in the same way as passenger aircraft under the new duty. This example assumes the following:

- an aircraft has a maximum take-off weight (MTOW) of 200 tonnes and can carry a maximum of 200 passengers;
- the aircraft flies to a non-EEA destination in Band B;
- it completes the journey twice, once with a high loading factor, and once with a low loading factor, as detailed below;
- X is a pound sterling figure for the rate per tonne for flights to this particular destination, yet to be determined; and
- B is the distance factor for Band B which is yet to be determined.

	<b>Plane carrying 120 economy and 40 business passengers</b>	<b>Plane carrying 70 economy and 20 business passengers</b>
<b>Tax under aviation duty</b>	$(200 \times \text{£}X) \times B$	$(200 \times \text{£}X) \times B$
<b>The total tax liability for passengers carried, under current air passenger duty rates</b>	£8,000	£4,400

**Box 2.2: Example 2 – Using different sizes of planes**

The following illustrative example shows how MTOW would work to ensure that different aircraft pay aviation duty more in line with their environmental costs no matter how many passengers are on board. Both of these aircraft in the example are flying with 160 passengers to the same destination but the larger one is capable of carrying more. The larger aircraft may have been fitted with a low number of seats, or be flying with a low load factor. This example shows that the new aviation duty will treat larger and smaller aircraft differently, encouraging operators to fly an appropriately sized aircraft for each route. This example assumes the following:

- there are two aircraft, one has a maximum take-off weight of 200 tonnes and can carry a maximum of 200 passengers, and the other has a maximum take-off weight of 400 tonnes and can carry a maximum of 600 passengers;
- both aircraft fly to a non-EEA destination in Band C;
- both flights carry 160 passengers, 120 economy class and 40 business class;
- X is a pound sterling figure for the rate per tonne for flights to this particular destination, yet to be determined; and
- C is the distance factor for Band C which is yet to be determined.

	<b>Plane carrying 120 economy and 40 business passengers</b>	<b>Plane carrying 120 economy and 40 business passengers</b>
<b>Tax under aviation duty</b>	$(200 \times \text{£X}) \times C$	$(400 \times \text{£X}) \times C$
<b>The total tax liability for passengers carried, under current air passenger duty rates</b>	£8,000	£8,000

# 3

## GENERAL AND BUSINESS AVIATION

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**3.1** Air passenger duty (APD) is only charged on aircraft over ten tonnes in weight and/or equipped to carry over 20 passengers – in practice these are generally large commercial aircraft using licensed airfields. However, all aircraft with engines, to a greater or lesser extent emit water vapour, carbon dioxide, nitrogen oxides, and hydrocarbon compounds, as well as creating noise. For this reason, the Government's starting point is that all aircraft should be considered as being within the scope of aviation duty.

**3.2** However, the Government recognises that there are a large number of aircraft in the UK that are non-commercial, or run by small local operators, some of which are currently subject to fuel duty. This chapter considers two options for determining which of these to include within the scope of aviation duty, and confirms that the Government's preference is to apply a de minimis weight limit of 5.7 tonnes, below which all aircraft will be subject to fuel duty whether using Avgas or Avtur.

### Private pleasure flying, business and general aviation

#### Background on the general aviation sector

**3.3** General aviation is a catch-all term used by industry broadly to cover non-commercial civil aviation. In theory it includes everything from hang gliders and helicopters to large jets owned, for example, by multinational companies or individuals. However, for the purposes of this consultation only powered fixed wing planes and helicopters are considered.

**3.4** General aviation can be segmented into several different categories - private transport (a flight from point A to point B) for individuals and businesses, recreational flying (including many circular flights from point A back to point A) and other aerial work. Within this, however, there is a range of other aerial activity, some of which is considered to be commercial but some of which can be more difficult to classify.

**3.5** Owners and operators of aircraft within the general aviation sector vary in size and range from the business that owns or leases a corporate jet, to an individual who builds and flies his own aircraft as a hobby. In addition, an aircraft may have more than one individual registered owner and in these cases are collectively responsible for the legal operation of that aircraft.

**3.6** While aircraft in the large carrier sector will almost exclusively be used for commercial purposes, aircraft in general aviation tend to have more of a mixed use; an aircraft may be used for both commercial and non-commercial purposes. It is common practice for private jets to be maintained by a management company that will charter it out during periods when the owner is not using it. Similarly aircraft used by flight schools to instruct pilots, will often be used at other times for recreational flights.

#### Population

**3.7** There are currently approximately 290 taxpayers for APD, of which only 40 are UK registered operators. There are 110 UK-registered commercial operators that currently do not pay APD.<sup>1</sup> These operators may provide small scheduled services for passengers and freight, but largely they will operate on a charter basis, or as an air taxi. These services allow companies or private individuals to hire a plane on a short-term basis with a pilot and many of these are firms that offer helicopter services.

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<sup>1</sup> CAA

**3.8** If the scope of aviation duty were to include all of general aviation, the number of taxpayers would expand. It is estimated that there would be approximately 12,500 aircraft operators who between them would account for an estimated 20,000 aircraft. Of this, it is estimated that 12,000 are UK registered aircraft (this includes helicopters of which there are 1,500). Of these 12,000 it is estimated that 1,000 are operated by UK APD taxpayers, while 3,000 are very small planes operated by individuals; a mixture of businesses, individuals and flying clubs own the remainder.<sup>2</sup>

**3.9** The Government also estimates that there are around 8,000 non-UK registered aircraft in the UK<sup>3</sup>, including:

- aircraft owned by non-UK registered APD taxpayers;
- aircraft registered in another state but kept in the UK; and
- small aircraft which fly to the UK from the near continent. This will include infrequent ad hoc private pleasure flights made by individuals as well as business flights that do not operate to any fixed schedule.

**Administrative burden of including general aviation in aviation duty**

**3.10** The Government estimates that including all general aviation within the scope of aviation duty would result in an administrative burden of up to £35 million per annum. This is broken down into £30 million for businesses and £5 million for individuals and does not include any one off set up costs. Further details on how these costs have been calculated are contained in the Impact Assessment accompanying this consultation document in Annex B, and the Government welcomes your comments on these estimates.

**3.11** A way of reducing this burden would be to reduce the taxpayer base by setting certain registration criteria or by adopting specific administrative procedures. The simplest method would be to set a de minimis limit below which operators would not be required to register for aviation duty.

### Fuel duty and general aviation

**3.12** While general aviation and much of business aviation is currently exempt from APD, much of the general aviation sector is currently subject to fuel duty. There are two main types of fuel used in aviation: aviation gasoline (Avgas – used by piston engined aircraft) and aviation turbine fuel (Avtur – used by jet and turbo propeller aircraft). Currently Avgas is taxed at a rebated rate, whether for private pleasure or commercial use, while Avtur is fully rebated so that the effective rate is nil.

**Energy Products Directive**

**3.13** Until 31 December 2006, the UK possessed a derogation from the Energy Products Directive (EPD) that permitted a reduced rate of duty on fuel used for private pleasure flying. The European Commission rejected the UK's application for renewal of the derogation and with effect from 1 November 2008 all fuel – both Avgas and Avtur - used for private pleasure flying is to be charged at the full rate of duty. The scope of fuel duty will increase from 1 November 2008 when the UK implements a new regime to meet its commitments under the EPD. With the loss of the derogation, Avgas will continue to be taxed irrespective of use, while Avtur will be taxed when used for private pleasure flying, but not for business flying.

<sup>2</sup> derived from G-Info database, CAA

<sup>3</sup> both aircraft kept in the UK and those transiting

**3.14** A consultation on the best way to implement this new regime for fuel used in private pleasure flying closed on 31 October 2007. The responses to this consultation and draft legislation concerning the detail of how this regime will operate from 1 November 2008 will be published in early 2008.

**3.15** The design of the new aviation duty will therefore, need to take into consideration the fact that aviation fuel is already taxed for certain sectors of general aviation, and it may be necessary to revisit the operation of the fuel regime that will be implemented from 1 November 2008 when aviation duty is implemented in November 2009.

### Options for restricting the scope of aviation duty to general aviation

#### Option a) setting a de minimis limit below which aircraft are outside the scope of aviation duty

**3.16** A weight limit of 5.7 tonnes is considered in the industry to be the point above which an aircraft moves from being a light aircraft with a limited commercial application to a commercial aircraft. Those aircraft below 5.7 tonnes generally accommodate a maximum of eight or nine passengers. A de minimis limit of 5.7 tonnes has also featured as part of considerations leading up to the inclusion of aviation in the EU Emissions Trading Scheme.

**3.17** Setting a de minimis limit of 5.7 tonnes below which operators would not be required to register for aviation duty would reduce the number of taxpayers of aviation duty to approximately 1100 and reduce the administrative burden to £8 million across the entire industry. However, this would leave a sector of aviation that would not be covered by either fuel duty or aviation duty - aircraft below 5.7 tonnes, using Avtur and making anything other than private pleasure flights. The Government's proposed option, therefore, would be to require all aircraft under 5.7 tonnes to pay duty on all fuel purchased, whether flying for private pleasure or commercial purposes. This would apply to all aircraft fuelling in the UK. Currently, international law compels the United Kingdom to provide a rebate for fuel duty on international flights and this rebate will continue to remain in place. This means that operators of aircraft under 5.7 tonnes who make international flights would continue to be able to reclaim the proportion of duty paid on fuel used in the international segment of a flight.

**3.18** There is a small population of operators of aircraft over 5.7 tonnes using Avgas that would pay fuel duty and also be liable for aviation duty, but at this stage the Government does not believe that the number of operators involved is great enough to justify additional administrative burden on all operators.

**3.19** Similarly, since fuel for private pleasure flying will be taxed from 1 November 2008, any operator of an aircraft over 5.7 tonnes will be required to pay duty on Avtur used for private pleasure flying and would also be liable for aviation duty. Again, the Government does not at this stage believe that the numbers involved are great enough to justify the additional administrative burden on all operators.

**3.20** The administrative costings associated with option a) are set out in the Impact Assessment in Annex B.

**Option b) restricting registration by the type of operator licence held**

**3.21** An alternative to a de minimis limit would be to restrict registration for aviation duty by the type of operator licence held. The main distinguishing factor in the type of operator licences held is the authority to carry passengers or freight for payment. To do this operators must hold either a Type A licence or a Type B licence that are issued by the Civil Aviation Authority (CAA). The distinction between the two licences depends on the weight and number of seats on an aircraft as follows:

- Type A – required by operators of aircraft over 10 tonnes or with 20 or more seats, who carry passengers, cargo and mail for remuneration; and
- Type B – required by operators of aircraft under 10 tonnes or with 19 seats or less, who carry passengers, cargo and mail for remuneration.

**3.22** Under this option, those not registered for aviation duty would be required to pay duty on all fuel purchased. This is similar to the de minimis option outlined above and would capture the smaller corporate executive jets; however, licences are granted on the basis that the operator is a commercial undertaking, this means that a private owner/ operators of an aircraft over 5.7 tonnes who do not charge for their flights are not required to hold either a Type A or a Type B licence and would consequently be excluded from aviation duty under this option. These operators would therefore not be within the scope of aviation duty and would benefit from this option if they made international flights, as they would be able to reclaim the duty on fuel used. On the other hand small air taxis that use Avgas would pay both fuel duty and aviation duty.

**3.23** This option also creates other anomalies in that it could be possible for the same plane to be taxed under both aviation duty for one flight yet fuel duty for another depending on who the recognised operator is at the time. This could arise where a privately owned aircraft is managed by a Type B licensed operator. When used by the Type B operator to provide say air taxi services, aviation duty would be due, however, if the same aircraft were used by the owner for private recreational use then fuel duty would be due. The situation would be further complicated if the owner was also a Type B operator who used the aircraft for both commercial and private personal use. This would create difficulties around distinguishing between the different flights and then accounting for the relevant duty (aviation duty or fuel duty).

**The Government's preferred approach**

**3.24** On balance, for the reasons set out above, the Government's preferred approach is to set a de minimis limit for aviation duty of 5.7 tonnes, with all fixed wing aircraft below this level within the scope of fuel duty. All helicopters of any size would be within the scope of fuel duty rather than aviation duty.

## Helicopters

**3.25** Of the 1500 helicopters registered in the UK, approximately half use Avtur and half use Avgas. Less than 100 UK registered helicopters have a MTOW of greater than 5.7 tonnes and type A or B operator licence-holders operate over 95 per cent of these. The different types of operator licences are explained in paragraph 3.20.

**3.26** Given the limited range of helicopters, generally no more than 500 miles, it is not expected that many UK registered helicopters will leave the UK, or that many helicopters will enter the UK from abroad. There are, however, approximately 100 foreign registered helicopters are permanently based in the UK. Around 100 helicopters have public service uses, including for the police, as air ambulance services or the coastguard. A typical helicopter sector flight will last less than 30 minutes and cover less than 100 miles.

**3.27** Given the particular features of the helicopter sector, the Government proposes that all helicopters should be excluded from aviation duty but pay fuel duty whether they are used for private or commercial purposes and regardless of whether they use Avgas or Avtur fuel.

### **QUESTIONS: GENERAL AVIATION**

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**3.28** 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?
21. Is 5.7 tonnes a suitable level at which to set a de minimis limit?
22. Is there an alternative measure that you feel is more appropriate?
23. Can you suggest an alternative way in which to ensure that aviation is captured either by aviation duty or fuel duty while minimising administrative burdens and complying with international law?
24. Do you agree that all helicopters should be placed within the fuel duty regime rather than the aviation duty regime?



# 4

## EXEMPTIONS

**4.1** The Government's broad aim for aviation duty is that it should ensure that aviation makes a greater contribution to covering its environmental costs, so that the largest polluters pay the most tax. However, in taking forward the design of the duty, the Government recognises that there may be certain legal, social or economic grounds for offering specific exemptions.

**4.2** APD currently offers a range of exemptions and EU ETS is also being designed with a number of exemptions in mind. These existing exemptions will be considered during the design of the aviation duty policy but it is apparent that not all of these exemptions translate readily to aviation duty.

**4.3** By introducing a de minimis limit of 5.7 tonnes, the Government will automatically be excluding a whole range of general aviation aircraft types such as hot air balloons, gliders, hang gliders and gyrocopters.

### Potential Exemptions

#### Legally required obligations

**4.4** The Government has legal obligations that will give rise to certain unavoidable exemptions from aviation duty. For example, the Government has obligations under the Vienna Convention on Diplomatic Relations, which is reflected in UK law in the Diplomatic Privileges Act. This means that aircraft flights conducted under the auspices of foreign diplomatic relations or representation should be treated for exemption and similar considerations would apply to visiting military forces.

**4.5** The list of exemptions from aviation duty that the Government expects to make in line with legal requirements is:

- military flights – domestic and foreign; and
- diplomatic flights – foreign heads of state and other foreign government ministers.

#### Possible additional economic exemptions

**4.6** The Government appreciates that there may be social or economic grounds for exempting further flights in addition to this, and stakeholders have raised a number of flights that they believe could have a case for exemption. The Government is prepared to consider these, but will need to be satisfied that sufficiently robust justifications can be put forward.

**4.7** A list of the potential exemptions that the Government will consider, if sufficient evidence is provided, are listed below:

- flights from the highlands and islands – the Government will consider making this an exemption from aviation duty, as it is from APD, but this will be subject to EU state aids clearance;
- emergency services – air ambulance, search and rescue;
- public services – police, fire, customs, any flights that may involve the aerial application of fire suppressing retardant, humanitarian relief flights;
- training flights – flights specifically used to gain a pilot's licence and not to maintain flight skills, where there may be multiple take-offs;

- maintenance flights, many of which are mandatory and will take place in another country if not the UK; and
- public aerial displays, although these may also be covered by the 5.7 tonnes de minimis limit.

**4.8** In considering the case for any exemptions the Government will need to appraise whether any conflict arises with the efficient operation of the European single market. The UK cannot be seen to be offering advantages to particular aircraft operators that in effect distort the market by interfering with free competition. Under EU State Aid rules the burden of responsibility lies with the UK to prove that it has not brought into operation any rules or regulations that have introduced market distortions. Therefore, where any doubt exists about effects on competition, the Government will need to be satisfied that sufficiently robust justifications can be put forward. Any exemption would also need to be easy to implement and not cause undue compliance costs or administrative burdens.

**4.9** It should be noted that, in introducing a de minimis limit of 5.7 tonnes, all aircraft below this weight would be subject to the fuel duty regime. While it will be possible for the Government to exempt certain types of flight or aircraft from aviation duty, it may be more difficult to exempt aircraft from fuel duty. The EU State Aid rules will apply here. The Government does not intend to exclude any flights from existing taxation obligations.

## QUESTIONS: EXEMPTIONS

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**4.10** The Government welcomes responses on the issue of potential exemptions. In particular, there is interest in answers to the questions set out below:

25. Do you think that there is a strong case for any of the exemptions listed above?
26. Are there any other categories of flight for which there is a strong case for exemption? If so, how would those exemptions be defined and enforced?
27. Would there be a strong environmental case against any of the possible exemptions?

# 5

## IMPACTS ON FREIGHT AND TRANSIT/TRANSFER SERVICES

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**5.1** During the informal consultation process, some stakeholders have raised particular issues regarding the economic impact of aviation duty on both the freight, and transit/transfer sector of the aviation industry. This chapter sets out these concerns and the Government's current position on the issues – and invites detailed responses from stakeholders.

### Freight

**5.2** Air passenger duty (APD) is a duty on the carriage on a chargeable aircraft of chargeable passengers. As such the carriage of freight (cargo and mail) by air is outside the scope of APD.

**5.3** Freight can be carried by air either on “freight-only” aircraft, “bellyhold” on board aircraft that also carry passengers, or on “combi” aircraft (part dedicated to passengers, part to freight bay). Freight-only aircraft account for around 35 per cent of all freight carried by air and for around 3 per cent of all UK commercial air traffic movements. Products typically carried by air include small, high-value items such as manufactured goods; urgent documents and spare parts; and foodstuffs and agricultural products. Air freight represents around 1.3 per cent by weight but nearly 50 per cent by value of UK extra-EU exports. However, a fifth of all these goods are transiting through the UK rather than being exported by UK producers.

**5.4** The carriage of freight by air contributes to the emissions that cause climate change and for reasons of fairness and consistency, the Government therefore believes that aviation duty should apply irrespective of whether aircraft are carrying freight, passengers or a mixture. In addition, the inclusion of freight within aviation duty reduces the burden on other sectors, such as direct passenger services.

**5.5** However, the Government recognises that UK air freight plays an important role in the economy, both for the industries directly involved with air freight and for those which make use of air freight. This consultation therefore seeks stakeholder views on the role of this sector within the economy and the detailed evidence as to the economic and environmental impact that aviation duty may have on these industries and on the wider economy. The issue of freight and aviation duty is considered in the Impact Assessment in Annex B and respondents' views on this are encouraged.

### QUESTIONS: FREIGHT

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**5.6** The Government's intention is that aviation duty will apply to aircraft carrying freight as well as those carrying passengers. Although decisions on rates are yet to be made, in considering the impact, it is envisaged that the duty levied per flight will be of a similar magnitude to the amount of APD paid on a similarly sized aircraft. However, responses on the following questions will be welcomed:

28. What economic impacts do you think there will be? You might wish to consider the Impact Assessment of freight in Annex B.
29. What would be the economic impacts on freight-only flights?
30. How might freight operators pass the costs through to consumers? How sensitive have consumers been in the past to a change in price?

31. What would be the environmental impacts of applying aviation duty to freight?
32. What would be the impact on freight hubs and modal transfers of goods from these hubs?
33. Do you have any other comments about the application of aviation duty to freight?

## Transit/Transfer Services

**5.7** At some airports a significant proportion of airport passenger traffic is made up of those for whom the airport is neither a first point of departure nor final destination. Such passengers, known as “transfer” and “transit” passengers,<sup>1</sup> are not chargeable passengers for air passenger duty purposes. The details of the exemption are set out in section 31 of the Finance Act 1994 and in HMRC guidance.<sup>2</sup>

**5.8** Transfer passengers tend to be a feature of network airlines with “hub and spoke” business models in particular operated by full-service network airlines or alliances, as opposed to airlines operating a “low-cost” model. In particular, London Heathrow airport has the highest number of international transfer passengers of any airport in the world; transfer traffic there represents 34 per cent of all passenger traffic.

**5.9** Some airlines argue that the knock-on impact of aviation duty would reduce UK transfer traffic by imposing an effective cost on the provision of transfer traffic; and that this would have negative consequences for the UK economy, including through a reduction in the frequency and variety of services that can be offered directly from London.

**5.10** The Government is keen to emphasise that under aviation duty it will be for individual airlines to determine how they wish to pass the cost onto passengers. In addition, the Government believes that aviation duty should be a coherent and simple duty which serves its environmental objectives and with which compliance is straightforward. The Government is therefore minded that the duty should apply irrespective of the nature of the passengers or goods being carried and therefore include transit/transfer passengers and goods.

**5.11** However, the Government is keen to seek stakeholders’ evidence as to any economic and environmental implications of that decision. The impacts are considered in the Impact Assessment in Annex B and respondents’ views on these are encouraged.

## QUESTIONS: TRANSIT/TRANSFER SERVICES

**5.12** The Government is minded that aviation duty, as a per plane duty, should apply irrespective of the passengers carried. However, responses on the following questions will be welcomed, and carefully considered:

34. What evidence can you provide about the impact of moving to aviation duty on the provision of transfer services?

<sup>1</sup> Technically, a “transit passenger” is a passenger who lands at an airport and takes off again on the same plane, and will normally remain on the aircraft. A transfer passenger will take off on a different plane, not necessarily with the same airline, having spent some time in the airport. Transfer passengers in the UK vastly outnumber transit passengers and for convenience the term “transfer passenger” is used in this consultation to refer to both.

<sup>2</sup> [www.hmrc.gov.uk](http://www.hmrc.gov.uk)

35. What are the economic and environmental implications of these impacts?
36. How might airlines change their business model in response to this design of the duty?
37. How might passenger behaviour be affected? How sensitive have consumers been in the past to a change in price?
38. What, if any, specific routes would be affected?



# 6

## ADMINISTRATION OF PER PLANE DUTY

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**6.1** The Government's starting point is that the new aviation duty should apply to all aircraft. The scope of the duty will therefore be wider than APD. The Impact Assessment, alongside this consultation document, includes an assessment of the possible impact and administrative burdens; this can be found in Annex B.

**6.2** The Government is aware that there are a number of potential options for organising the collection of aviation duty, but that some are likely to impose higher burdens – on business and HMRC – than others. This chapter considers two possible alternatives for the collection of the duty – for airport operators to pay the duty directly, or for airports to collect and account for the duty.

### **Option a: aircraft operators to pay the duty**

**6.3** One option for administering aviation duty is to follow the model of air passenger duty (APD) and have the operators of the aircraft as the taxpayer. Under APD, airlines report information to HMRC on: the number of passengers carried, whether the passengers were flying to EEA or non-EEA destinations, the different classes of passengers flown and also the number of exempt passengers. This is then assured using Civil Aviation Authority (CAA) data on the number of flights and passengers uplifted.

**6.4** The same arrangement could, in theory, work for aviation duty, where aircraft operators report the appropriate duty basis to HMRC along with the number of flights they have made with different planes. However, there are around 8,000 non-UK registered aircraft in the UK and a number of aircraft which fly to the UK on a regular basis for both private pleasure and commercial purposes. While a number of these would be captured by the de minimis limit and included within the fuel duty regime, it would be difficult to ensure any foreign registered aircraft and visiting aircraft over 5.7 tonnes were subject to the aviation duty regime.

**6.5** For this reason, it makes sense to consider alternative options. The Impact Assessment, alongside this consultation document, includes an assessment of the possible impacts and administrative burdens; this can be found in Annex B.

### **Option b: airports to collect and account for the duty**

**6.6** An alternative option to reduce the administrative burden of the duty might be to make licensed airports the tax collector on behalf of HMRC. Many airports already have a well-established system for collecting a lot of the information (including MTOW) that would be required to administer the duty, as they use this information to calculate other charges and fees from their users. Many of the licensed aerodromes will already have established relationships with HMRC for other taxes such as fuel duty and VAT as well as having reporting requirements to the CAA.

**6.7** Using airports to collect the duty would mean an additional burden for airports in collating and returning the revenue to HMRC. However, there is the potential for this to be offset by the reduction in costs to those airlines already returning information under APD and it would replace the need for thousands of organisations and individuals to set up systems to return information, which would impose a much greater cost on the aviation industry as a whole. There would also be cash flow benefits to the airports in the form of interest earned over the period they hold the revenue for HMRC - this is likely to offset the increased administrative burden.

**6.8** The Government believes that this may be a simpler option although further information from the industry will be needed in order to fully evaluate this.

**Impact on unlicensed airfields** **6.9** There are currently 142 licensed airports that will deal with the vast proportion of all flights in the UK and are regulated by the CAA. In addition there are a possible 2000 unlicensed airfields in the UK, which are often no more than an airstrip created out of farmland.

**6.10** Aircraft operating as a commercial undertaking (including air taxis and flight schools) are required to land at licensed airfields, and there is usually a charge imposed by the airfield for this; however, private operators are able to land at any airfield, whether licensed or unlicensed. Landing and take off from these unlicensed airfields often require nothing more than permission from the airfield owner. Services provided at these unlicensed airfields are very basic, if there are any at all, and consequently landing fees are comparatively very low and are the preferred choice for private owners. In fact, in an effort to minimise costs, private operators will often select an alternative neighbouring airfield if the charges are lower.

**6.11** However, if a 5.7 tonne de minimis limit were used for aviation duty (so that all aircraft under this limit paid fuel duty and all aircraft above paid aviation duty), then the problem of private fliers seeking unlicensed airfields to avoid the duty could be avoided to a large extent. There are very few unlicensed airfields that have the ability to take an aircraft heavier than 5.7 tonnes, owing to their size, and therefore the vast majority of aircraft that would fall into aviation duty would have to land at licensed airfields. This would mean that the vast majority of heavier aircraft would be captured by having airports collect the duty for HMRC and the smaller aircraft would be captured by being included in the fuel duty regime.

## QUESTIONS: ADMINISTRATION OF PER PLANE DUTY

**6.12** The Government welcomes views on the administrative options that have been set out, and in particular would be interested in responses to the questions below.

**6.13** Option a: aircraft operators to collect and account for aviation duty:

39. Would having all aircraft operators registering to pay the duty be an appropriate and workable way of administering the duty?
40. Do aircraft operators have the means to report the appropriate information on the number of flights taken and any relevant information on the duty basis to HMRC? Would any of the measures mentioned under the duty section cause problems for aircraft operators?
41. What reporting requirements do aircraft operators have to airports, the CAA and other bodies? How are these carried out i.e. monthly, annually, per flight?
42. Do the estimates in the Impact Assessment for the administration burden reflect your expected costs?
43. What problems might arise from having aircraft operators as the registered tax payer?

**6.14** Option b: licensed airports to collect and account for the duty. When answering these questions please consider how collecting the duty would fit in with current fee structures, how other fees are collected, how debt management currently works at airports and possible distortions that could be caused by this method.

44. Would the alternative of using airports to collect the duty be an appropriate and workable arrangement?
  - For the users of licensed airports?
  - For licensed airports themselves?
45. Do licensed airports have the means to collect and report the appropriate information? Would any of the measures suggested for the duty basis cause issues for these airports in collecting the duty?
46. To what extent could general aviation and business aviation traffic move to non-licensed airports?
47. Please refer to the Impact Assessment; does our assessment of the administration burdens for airports collecting the duty reflect your knowledge of how much this might cost? If not please let us know where it differs.
48. Any further comments on this issue?
49. Are there any comments raised on the issue of the impact on unlicensed airfields?



**7.1** The Government is committed to developing aviation duty in a way that will meet the criteria set out in Pre-Budget Report 2007, and the principles set out in Chapter 1. These include that the duty should be more in line with the environmental impact of flights, provide incentives for the more efficient use of planes, impose minimal burdens on industry and ensure consistency with the UK's commitments under international law. This consultation document has set out a number of proposals for the design of an aviation duty that will meet with these principles.

### Lead design options

**7.2** The following conclusions summarise the Government's current preference for the design of aviation duty, after considering the issues set out in Chapter 2-6:

- for the basis of aviation duty to use a combination of the Maximum Take-Off Weight of the aircraft, and a distance factor – determined by the geographical band an aircraft flies to. This band is defined either by membership of the EEA or the distance of the capital city from London;
- for there to be a 5.7 tonnes de minimis limit below which aircraft will not be liable for aviation duty, but where powered, fixed wing aircraft will be subject to fuel duty;
- that all helicopters should be excluded from aviation duty, but subject to fuel duty;
- that there will be exemptions for foreign military and diplomatic flights, and that exemptions will be considered in a number of other areas, subject to robust justification being provided;
- that freight-only flights will be included within the scope of the duty;
- that the duty will be applied to the plane, regardless of the type of passengers on board (transfer or not); and
- that the duty will be collected and accounted for by licensed airports.

### Consultation Process

**7.3** The proposals set out represent the Government's current thinking. The purpose of the consultation process is to discuss these issues with stakeholders – and the final design of the duty will only be determined once these views have been taken in to consideration. The Government looks forward to engaging stakeholders on these issues over the consultation period. The consultation period will close on 24 April 2008.



# 8

## HOW TO RESPOND TO THIS CONSULTATION

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### HOW TO RESPOND

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**8.1** The Government welcomes all responses to the questions outlined in this paper. The consultation will run for 12 weeks from 3 until 24 April 2008. Please ensure that responses to this document reach us by the closing date. We cannot guarantee to consider your response if it arrives after that date.

Responses should be sent to:

Aviation Duty Consultation  
Environment and Transport Taxes  
HM Treasury  
1 Horse Guards Road  
London SW1A 2HQ

Email: [aviationduty@hm-treasury.x.gsi.gov.uk](mailto:aviationduty@hm-treasury.x.gsi.gov.uk)

Fax: 020 7270 4589

Telephone queries should be directed to:

020 7270 5200

**8.2** This paper is available on the Treasury's public website at: [www.hm-treasury.gov.uk](http://www.hm-treasury.gov.uk)

**8.3** When responding, please state whether you are responding on behalf of an individual or representing the views of an organisation. If responding on behalf of a larger organisation, please make it clear who the organisation represents and, where applicable, how the views of members were assembled.

### Confidentiality

**8.4** All written responses may be made public on the Treasury's website unless the author specifically requests otherwise in writing.

**8.5** Information provided in response to this consultation, including personal information, may be published or disclosed in accordance with the access to information regime. These are primarily the Freedom of Information Act 2000 (FOIA), the Data Protection Act (DPA) and the Environmental Information Regulations 2004. If you want the information that you provide to be treated as confidential, please be aware that, under the FOIA, there is a statutory Code of Practice with which public authorities must comply and which deals, amongst other things, with obligations of confidence. In view of this it would be helpful if you could explain to us why you regard the information you have provided as confidential. If we receive a request for disclosure of information we will take full account of your explanation, but we cannot give an assurance that confidentiality will be maintained in all circumstances.

**8.6** In the case of electronic responses, general confidentiality disclaimers that often appear at the bottom of emails will be disregarded for the purpose of publishing responses unless an explicit request for confidentiality is made in the body of the response.

**8.7** Subject to the previous two paragraphs, if you wish part (but not all) of your response to remain confidential, please supply two versions – one for publication on the website with the confidential information deleted, and another confidential version for use by the Treasury and HMRC.

**8.8** A summary of responses will be published at: [www.hm-treasury.gov.uk](http://www.hm-treasury.gov.uk). Any Freedom of Information Act queries should be directed to:

Correspondence and Enquiry Unit  
Freedom of Information Section  
HM Treasury  
1 Horse Guards Road  
London SW1A 2HQ

Telephone: 020 7270 4558

Fax: 020 7270 4681

Email: [public.enquiries@hm-treasury.gov.uk](mailto:public.enquiries@hm-treasury.gov.uk)

### **Code of practice for written consultation**

**8.9** This consultation is being conducted in line with the Code of Practice for written consultation (a full version can be found at [www.cabinetoffice.gov.uk/regulation/code.htm](http://www.cabinetoffice.gov.uk/regulation/code.htm)), which sets down the following criteria:

- Consult widely throughout the process, allowing a minimum of 12 weeks for written consultation at least once during the development of the policy;
- Be clear about what the proposals are, who may be affected, what questions are being asked, and the timescale for responses;
- Ensure the consultation is clear, concise and widely accessible;
- Give feedback regarding the responses received and how the consultation process influenced the policy;
- Monitor the department's effectiveness at consultation, including through the use of a designated consultation coordinator; and
- Ensure your consultation follows better regulation best practice, including carrying out an Impact Assessment if appropriate.

**8.10** If you feel that this consultation does not fulfil these criteria, please contact:

Sowdamini Kadambari  
HM Treasury  
1 Horse Guards Road  
London SW1A 2HQ

Telephone: 020 7270 4867

Email: [Sowdamini.Kadambari@hm-treasury.gov.uk](mailto:Sowdamini.Kadambari@hm-treasury.gov.uk)

# A

## SUMMARY OF QUESTIONS

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**A.1** The following is a summary of all the questions in this Consultation Document. While the Government has consulted widely to ensure that all of the issues surrounding the introduction of aviation duty are understood, responses on any topics/issues that stakeholders believe we should consider will be welcomed. Any evaluations of the overall impact of the duty on the respondent's business would also be welcome.

### The basis of the duty: aircraft measure

**A.2** The Government's preferred option for an aircraft measure is Maximum Take-Off Weight, however two other options are also considered as part of this consultation. The Government welcomes responses to the following questions:

**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?
2. Are there any possible distortions/problems caused by using MTOW?
3. What do you think the environmental benefits of using MTOW would be?
4. How well do you think that using MTOW as the basis for the duty helps the Government achieve its objectives?

**A.4** NOx emissions in the landing and take-off cycle:

5. What would be the simplest method of using NOx emissions: banding or straight calculation of either the constant NOx emissions or some function of NOx emissions?
6. Are there any possible distortions/problems caused by using NOx emissions in the landing and take-off cycle as the basis for the duty?
7. What would be the best source of robust data on NOx emissions in the landing and take-off cycle?

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

8. What would be the simplest method of using CO<sub>2</sub> emissions in the landing and take-off cycle: banding or straight calculation of either the constant CO<sub>2</sub> emissions or some function of CO<sub>2</sub> emissions?
9. Are there any possible distortions/problems caused by using CO<sub>2</sub> emissions in the landing and take-off cycle as the basis for the duty?
10. What would be the best source of robust data on CO<sub>2</sub> emissions in the landing and take-off cycle?

**A.6** Other basis questions:

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

12. The Government would also welcome views on the extent to which the new aviation duty could play a role in covering other environmental costs as well as incentivise airlines to use quieter aircraft.

**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:

13. Do you agree that banding is the most appropriate measure?
14. Do you agree with the banding system that the Government has suggested?
15. How well does a banded approach to distance achieve environmental objectives, given the need to avoid a perverse incentive to fly via intermediate hubs?
16. What are the possible distortions/problems caused by using distance?
17. What would the advantages/disadvantages of using great circle distance be?
18. How would you combine distance with other criteria?
19. Are there other alternatives for including a distance factor, not already covered?

## General and business aviation

**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?
21. Is 5.7 tonnes a suitable level at which to set a de minimis limit?
22. Is there an alternative measure that you feel is more appropriate?
23. Can you suggest an alternative way in which to ensure that aviation is captured either by aviation duty or fuel duty while minimising administrative burdens and complying with international law?
24. Do you agree that all helicopters should be placed within the fuel duty regime rather than the aviation duty regime?

## Exemptions

**A.9** The Government welcomes responses on the issue of potential exemptions. In particular, there is interest in answers to the questions set out below:

25. Do you think that there is a strong case for any of the exemptions listed above?
26. Are there any other categories of flight for which there is a strong case for exemption? If so, how would those exemptions be defined and enforced?

27. Would there be a strong environmental case against any of the possible exemptions?

## Freight

**A.10** The Government's intention is that aviation duty will apply to aircraft carrying freight as well as those carrying passengers. Although decisions on rates are yet to be made, in considering the impact, it is envisaged that the duty levied per flight will be of a similar magnitude to the amount of APD paid on a similarly sized aircraft. However, responses on the following questions will be welcomed:

28. What economic impacts do you think there will be? You might wish to consider the Impact Assessment of freight in Annex B.
29. What would be the economic impacts on freight-only flights?
30. How might freight operators pass the costs through to consumers? How sensitive have consumers been in the past to a change in price?
31. What would be the environmental impacts of applying aviation duty to freight?
32. What would be the impact on freight hubs and modal transfers of goods from these hubs?
33. Do you have any other comments about the application of aviation duty to freight?

## Transit/transfer passengers

**A.11** The Government is minded that aviation duty, as a per plane duty, should apply irrespective of the passengers carried. However, responses on the following questions will be welcomed, and carefully considered:

34. What evidence can you provide about the impact of moving to aviation duty on the provision of transfer services?
35. What are the economic and environmental implications of these impacts?
36. How might airlines change their business model in response to this design of the duty?
37. How might passenger behaviour be affected? How sensitive have consumers been in the past to a change in price?
38. What, if any, specific routes would be affected?

## Administration of per plane duty

**A.12** The Government welcomes views on the administrative options that have been set out, and in particular would be interested in responses to the questions below:

**A.13** Option a: aircraft operators to collect and account for aviation duty:

39. Would having all aircraft operators registering to pay the duty be an appropriate and workable way of administering the duty?

40. Do aircraft operators have the means to report the appropriate information on the number of flights taken and any relevant information on the duty basis to HMRC? Would any of the measures mentioned under the duty section cause problems for aircraft operators?
41. What reporting requirements do aircraft operators have to airports, the CAA and other bodies? How are these carried out i.e. monthly, annually, per flight?
42. Do the estimates in the Impact Assessment for the administration burden reflect your expected costs?
43. What problems might arise from having aircraft operators as the registered tax payer?

**A.14** Option b: licensed airports to collect and account for the duty. When answering these questions please consider how collecting the duty would fit in with current fee structures, how other fees are collected, how debt management currently works at airports and possible distortions that could be caused by this method.

44. Would the alternative of using airports to collect the duty be an appropriate and workable arrangement?
  - For the users of licensed airports?
  - For licensed airports themselves?
45. Do licensed airports have the means to collect and report the appropriate information? Would any of the measures suggested for the duty basis cause issues for these airports in collecting the duty?
46. To what extent could general aviation and business aviation traffic move to non-licensed airports?
47. Please refer to the Impact Assessment; does our assessment of the administration burdens for airports collecting the duty reflect your knowledge of how much this might cost? If not please let us know where it differs.
48. Any further comments on this issue?
49. Are there any comments raised on the issue of the impact on unlicensed airfields?

# B

## IMPACT ASSESSMENT

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There follows the Impact Assessment:

## Summary: Intervention & Options

<b>Department /Agency:</b> HM Treasury/ HM Revenue and Customs	<b>Title:</b> Consultation Impact Assessment of aviation duty and reform to aviation fuel taxation	
<b>Stage:</b> Consultation	<b>Version:</b> 1.0	<b>Date:</b> 1 January 2008
<b>Related Publications:</b> Aviation duty: a consultation		

**Available to view or download at:**

<http://www.hm-treasury.gov.uk>

**Contact for enquiries:** [aviationduty@hm-treasury.gov.uk](mailto:aviationduty@hm-treasury.gov.uk)

**Telephone:** 020 7270 5200

**What is the problem under consideration? Why is government intervention necessary?**

Air passenger duty has played a valuable role in ensuring that passengers understand and acknowledge the environmental costs of their actions and in ensuring that the aviation industry contributes towards its environmental costs and makes a fair contribution to the funding of public services. It has also resulted in a reduction of carbon dioxide emissions from this sector. The reform of aviation taxation will improve the fairness of the duty and correlation with environmental damage to ensure that all flights are taxed and provide better incentives for environmental performance.

**What are the policy objectives and the intended effects?**

- In developing a per plane duty – or aviation duty - to replace air passenger duty, the Government will be guided by a number of principles. A new duty should:
  - ensure the industry makes a greater contribution towards its environmental costs and to ensure that the aviation sector continues to contribute fairly and equitably towards the funding of public services;
  - be a fairer duty more in line with the environmental impacts of flights, including the distance travelled, and which takes account of any social or economic impacts including market distortions;
  - provide incentives for the more efficient use of planes by taxing similarly sized aircraft the same, no matter how full the plane;
  - apply, as a starting assumption, to all take-offs, as all aircraft produce emissions;
  - have a simple, transparent and coherent duty which imposes minimal administrative burdens on industry and Government and minimises the capacity for non-compliance and for artificial tax-motivated behaviour which does not deliver environmental benefits; and
  - ensure consistency with the UK's commitments under international law, including the Chicago Convention, bilateral agreements and EU law.

**What policy options have been considered? Please justify any preferred option.**

There are a number of different options for the design of a per plane duty, and a number of different issues to be considered in the design of the duty. This consultation Impact Assessment focuses on the design issues that relate to the administrative burden that the duty will place on private individuals, firms and HMRC.

In particular, the administrative impact of the scope of the new duty – i.e. the extent to which general aviation is included within the scope of the new duty, is considered and costs estimated. The preferred option in this respect is for only aircraft with a greater maximum take-off weight than 5.7 tonnes to be required to pay the aviation duty, with all aircraft below 5.7 tonnes and helicopters to be required to pay fuel duty. These issues are also covered in Chapter 3 of the main consultation document.

In addition, the administrative cost of different options for collecting the duty are estimated – and the preferred option here is to require a third party, such as airports, to collect the duty. These issues are also covered in Chapter 6 of the main consultation document.

This consultation Impact Assessment also considers other design issues that are covered in the main consultation document, in chapters 2, 4 and 5, that will not have significant administrative costs, but which may have other social, economic and distributional impacts. These are also considered in this assessment, but using qualitative methods.

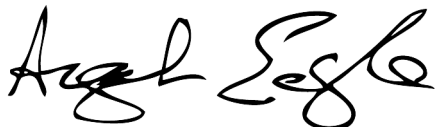
**When will the policy be reviewed to establish the actual costs and benefits and the achievement of the desired effects?**

The final Impact Assessment will be reviewed in 2011-12. Data for at least one complete year will be required to establish the actual costs and benefits and achievement of desired effects.

**Ministerial Sign-off** For consultation stage Impact Assessments:

***I have read the Impact Assessment and I am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the leading options.***

Signed by the responsible Minister:



.....Date: 24/01/2008

## Summary: Analysis & Evidence

**Policy Option:** See Chapter 3: Consultation Document (option a)

**Description:** Only aircraft over 5.7 tonnes will pay aviation duty. Helicopters are not included.

<b>COSTS</b>	<b>ANNUAL COSTS</b>		Description and scale of <b>key monetised costs</b> by 'main affected groups'
	<b>One-off</b> (Transition)	<b>Yrs</b>	
	<b>£ Consulting</b>		Costs shown are ONLY the costs of the administrative burden on businesses and individuals from this option.
	<b>Average Annual Cost</b> (excluding one-off)		
<b>£ 5 - 8 million</b>		<b>Total Cost (PV)</b>	<b>£ N/A</b>
<p><b>Other key non-monetised costs</b> by 'main affected groups'</p> <p>Costs to those operators with a poor environmental performance.</p> <p>Costs to transfer services, freight-only aircraft and long-haul direct flights.</p>			

<b>BENEFITS</b>	<b>ANNUAL BENEFITS</b>		Description and scale of <b>key monetised benefits</b> by 'main affected groups'
	<b>One-off</b>	<b>Yrs</b>	
	<b>£ Consulting</b>		The main benefit is to make the duty fairer by bringing it more into line with environmental impact. This can not be quantified at this stage. Benefits shown are ONLY the administrative burden impacts of removing APD.
	<b>Average Annual Benefit</b> (excluding one-off)		
<b>£ 1 - 2 million</b>		<b>Total Benefit (PV)</b>	<b>£ N/A</b>
<p><b>Other key non-monetised benefits</b> by 'main affected groups'</p> <p>Benefits to those operators with a low environmental impact.</p> <p>Incentive to further reduce environmental impact.</p>			

### Key Assumptions/Sensitivities/Risks

Assume that administration burden of new aviation duty is the same per business as air passenger duty. Uncertainty around data on total taxpayer population.

<b>Price Base</b> Year	<b>Time Period</b> Years	<b>Net Benefit Range</b> (NPV) <b>£ N/A</b>	<b>NET BENEFIT</b> (NPV Best estimate) <b>£ N/A</b>
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What is the geographic coverage of the policy/option?		UK		
On what date will the policy be implemented?		1 November 2009		
Which organisation(s) will enforce the policy?		HMRC		
What is the total annual cost of enforcement for these organisations?		£ To be determined		
Does enforcement comply with Hampton principles?		Yes		
Will implementation go beyond minimum EU requirements?		N/A		
What is the value of the proposed offsetting measure per year?		£ N/A		
What is the value of changes in greenhouse gas emissions?		£ Consulting		
Will the proposal have a significant impact on competition?		Consulting		
Annual cost (£-£) per organisation (excluding one-off)	Micro <b>£2,400</b>	Small <b>£2,100</b>	Medium <b>£3,400</b>	Large <b>£4,500</b>
Are any of these organisations exempt?	No	No	N/A	N/A

<b>Impact on Admin Burdens Baseline</b> (2005 Prices)		(Increase - Decrease)	
Increase of	£ 5 - 8 m	Decrease of	£ 1 - 2 m
		<b>Net Impact</b>	<b>£ 3 - 7 m</b>

Key:

Annual costs and benefits: Constant Prices

(Net) Present Value

## Summary: Analysis & Evidence

**Policy Option: See Chapter 3: Consultation Document (All Aircraft)**

**Description: Include all aircraft in aviation duty.**

<b>COSTS</b>	<b>ANNUAL COSTS</b>		Description and scale of <b>key monetised costs</b> by 'main affected groups'
	<b>One-off</b> (Transition)	<b>Yrs</b>	
	<b>£ Consulting</b>		Costs shown are ONLY the costs of the administrative burden on businesses and individuals from this option.
	<b>Average Annual Cost</b> (excluding one-off)		
<b>£ £25m to £35m</b>		<b>Total Cost (PV)</b>	<b>£ N/A</b>
<p><b>Other key non-monetised costs</b> by 'main affected groups'</p> <p>Costs to operators with a greater environmental impact.</p> <p>Costs to transfer services, freight-only aircraft and long-haul direct flights.</p>			

<b>BENEFITS</b>	<b>ANNUAL BENEFITS</b>		Description and scale of <b>key monetised benefits</b> by 'main affected groups'
	<b>One-off</b>	<b>Yrs</b>	
	<b>£ Consulting</b>		The main benefit is to make the duty fairer by bringing it more into line with environmental impact. This can not be quantified at this stage. Benefits shown are ONLY the administrative burden impacts of removing APD.
	<b>Average Annual Benefit</b> (excluding one-off)		
<b>£ 1m to 2m</b>		<b>Total Benefit (PV)</b>	<b>£ N/A</b>
<p><b>Other key non-monetised benefits</b> by 'main affected groups'</p> <p>Benefits to operators with a low environmental impact. Incentive to further reduce environmental impact.</p>			

### Key Assumptions/Sensitivities/Risks

Assume that administration burden of new aviation duty is the same per business as air passenger duty. Uncertainty around data on total taxpayer population.

Price Base Year	Time Period Years	<b>Net Benefit Range</b> (NPV) <b>£ N/A</b>	<b>NET BENEFIT</b> (NPV Best estimate) <b>£ N/A</b>	
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What is the geographic coverage of the policy/option?			UK	
On what date will the policy be implemented?			1 November 2009	
Which organisation(s) will enforce the policy?			HMRC	
What is the total annual cost of enforcement for these organisations?			£ To be determined	
Does enforcement comply with Hampton principles?			Yes	
Will implementation go beyond minimum EU requirements?			No	
What is the value of the proposed offsetting measure per year?			£ N/A	
What is the value of changes in greenhouse gas emissions?			£ Consulting	
Will the proposal have a significant impact on competition?			Consulting	
Annual cost (£-£) per organisation (excluding one-off)	Micro <b>£2,400</b>	Small <b>£2,100</b>	Medium <b>£3,400</b>	Large <b>£4,500</b>
Are any of these organisations exempt?	No	No	N/A	N/A

<b>Impact on Admin Burdens Baseline</b> (2005 Prices)			(Increase - Decrease)	
Increase of	£ 21m - 29m	Decrease of	£ 1m - 2m	<b>Net Impact</b> <b>£ 19m - 28m</b>

Key: Annual costs and benefits: (Net) Present Value

## Summary: Analysis & Evidence

**Policy Option:** See Chapter 6: Consultation Document (option b)

**Description:** Only aircraft over 5.7 tonnes will pay aviation duty. Helicopters are not included. Airports will collect duty.

<b>COSTS</b>	<b>ANNUAL COSTS</b>		Description and scale of <b>key monetised costs</b> by 'main affected groups'
	<b>One-off</b> (Transition)	<b>Yrs</b>	
	£ Consulting		Costs shown are ONLY the costs of the administrative burden on businesses from this option.
	<b>Average Annual Cost</b> (excluding one-off)		
£ 1 - 2m		<b>Total Cost (PV)</b>	£ N/A
<p><b>Other key non-monetised costs</b> by 'main affected groups'</p> <p>Costs to operators with a greater environmental impact.</p> <p>Costs to transfer services, freight-only aircraft and long-haul direct flights.</p>			

<b>BENEFITS</b>	<b>ANNUAL BENEFITS</b>		Description and scale of <b>key monetised benefits</b> by 'main affected groups'
	<b>One-off</b>	<b>Yrs</b>	
	£ Consulting		The main benefit is to make the duty fairer by bringing it more into line with environmental impact. This can not be quantified at this stage. Benefits shown are ONLY the administrative burden impacts of removing APD.
	<b>Average Annual Benefit</b> (excluding one-off)		
£ 1 - 2m		<b>Total Benefit (PV)</b>	£ N/A
<p><b>Other key non-monetised benefits</b> by 'main affected groups'</p> <p>Benefits to operators with a low environmental impact. Incentive to further reduce environmental impact.</p>			

### Key Assumptions/Sensitivities/Risks

Assume that administration burden of new Aviation duty is the same per business as air passenger duty. Uncertainty around data on total taxpayer population.

Price Base Year	Time Period Years	<b>Net Benefit Range</b> (NPV) £ N/A	<b>NET BENEFIT</b> (NPV Best estimate) £ N/A
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What is the geographic coverage of the policy/option?	UK			
On what date will the policy be implemented?	1 November 2009			
Which organisation(s) will enforce the policy?	HMRC			
What is the total annual cost of enforcement for these organisations?	£ To be determined			
Does enforcement comply with Hampton principles?	Yes			
Will implementation go beyond minimum EU requirements?	No			
What is the value of the proposed offsetting measure per year?	£ N/A			
What is the value of changes in greenhouse gas emissions?	£ Consulting			
Will the proposal have a significant impact on competition?	Consulting			
Annual cost (£-£) per organisation (excluding one-off)	Micro N/A	Small £2,600	Medium £4,300	Large £5,500
Are any of these organisations exempt?	No	No	N/A	N/A

<b>Impact on Admin Burdens Baseline</b> (2005 Prices)			(Increase - Decrease)		
Increase of	£ 1-2m	Decrease of	£ 1-2m	<b>Net Impact</b>	£ 0

Key: Annual costs and benefits: Constant Prices

(Net) Present Value

# Evidence Base (for summary sheets)

## **1. Introduction**

### **1.0. Consultation**

- 1.0.1. The main section of this consultation document highlights the issues and design options that respondents are asked for their views on. The expected impacts of the new duty in regard to these issues are explored in more detail in this Impact Assessment. Respondents are asked to consider both documents in parallel.
- 1.0.2. This Impact Assessment attempts to present a reasonable view of the likely costs, benefits and impact of the new aviation duty. At this stage, a largely qualitative assessment has been made highlighting the main issues and the aim of the consultation is to seek evidence from respondents in order to quantify the impacts of the new duty. A final Impact Assessment will be published in due course giving full quantitative estimates of these impacts, where that is possible, based on respondents' evidence.
- 1.0.3. Section 2 below sets out the different duty design options. There are five options covering different elements of duty design. However, the benefits, risks and issues of the main changes are discussed first. The carbon, competition and small firms assessments can be found in section 3.

### **1.1. Policy Objectives and Intended Effects**

- 1.1.1. These are outlined in Chapter 1 of the main text.

### **1.2. Impact of increase in revenue from aviation duty**

- 1.2.1. The Government has announced that the new duty will generate an extra £520 million in revenue in 2010-11, compared to a continuation of air passenger duty with rates increased only in line with inflation. This will be achieved by setting appropriate duty rates and decisions on these will be made in due course following the results of this consultation. The Government takes the impact of taxation on particular sectors into account when determining the levels of taxation across all sectors of the economy, alongside other objectives such as maintaining sound public finances and ensuring that all sectors make a fair contribution. This increase in taxation in the aviation sector will lead to a reduction in carbon dioxide emissions of between 0.3 and 0.9MtCO<sub>2</sub> in 2010-11 with a central estimate of 0.5MtCO<sub>2</sub>, which when emitted at high altitude may have a greater climate change impact. This is discussed further in section 3.1 below.
- 1.2.2. The Government is always keen to understand the impact of the level of taxation on particular sectors. However, this Impact Assessment considers more specifically the change from air passenger duty to aviation duty, and the associated duty design options. The costs and benefits presented in the summary pages above, and the impacts assessed below are therefore for the switch between these two tax systems and not for the increase in the level of taxation.

## **2. Options**

### **2.0. Options considered in this assessment**

- 2.0.1. The Government now intends to reform the taxation of aviation and move from calculating the duty on a per passenger basis to a per flight basis. This document will look at the various design options for such a duty by setting out the advantages and disadvantages of each. These are mostly set out in a qualitative way, however estimates of the change to the administrative burden of the new duty have

been made. Respondents to the consultation are asked to provide evidence which may allow quantitative assessments, or improve those already provided, of these advantages and disadvantages. They may also wish to provide further options, which the Government will consider in line with its objectives stated in the consultation document.

2.0.2. When considering the duty design options in this document, whichever options are chosen the total revenue collected from the duty will still be the same. This means if, for example, there is an exemption or reduction in rates for a particular sector of the industry, which may have benefits for that sector, then rates will need to be raised for the remaining sectors, which may have costs for those other sectors. The Government will consider the impacts of the new duty on different sectors, but will want to assess the overall impact across the whole industry in line with the objectives stated in the consultation document.

2.0.3. The different issues and options for the design of the duty are set out in the Consultation Document in the following Chapters:

Chapter 2: The basis of the duty

Chapter 3: General and Business Aviation

Chapter 4: Exemptions

Chapter 5: Impacts on Freight and Transit/transfer services

Chapter 6: Administration of aviation duty

Chapter 7: Conclusions

2.0.4. These options are also covered by this Impact Assessment and are further examined below. The options for the new duty can be divided between those that largely impact on the administrative burden for private individuals and firms and for HMRC, and those that do not, but which may have other social, economic and distributional impacts. The first group of options which are analysed in this document are those which impact the administrative burdens of the duty and relate to how much of general aviation is included within the scope of the new duty and the option to require a third party, such as airports, to collect the duty for HMRC. These options have been summarised in the tables above, and relate to Chapters 3 and 6 of the Consultation Document. The administrative burdens under these different options have been quantified and are presented below in sections 2.1 and 2.2.

2.0.5. The first of the options that will affect the administrative costs of the duty is to introduce aviation duty with rates calculated using a suitable metric of aircraft environmental impact and distance flown and reform the requirements to pay fuel duty on aviation turbine fuel. This issue is discussed in Chapter 3 of the consultation document, with two options outlined as a) and b) below. The Government confirms that its preference is to apply a de minimus weight limit of 5.7 tonnes, as in option a).

- a. All aircraft over 5.7 tonnes taking off in the UK will be liable for the new aviation duty. All aircraft using aviation gasoline and aircraft under 5.7 tonnes using aviation turbine fuel will pay fuel duty. Helicopters will not be liable for aviation duty, but will be required to pay duty on fuel. Any aircraft making an international journey will be able to reclaim the fuel duty for the journey.
- b. All aircraft taking off in the UK operated by operators with type A or type B licenses will be liable for the new aviation duty. All aircraft using aviation gasoline and all other aircraft not operated by type A or B operators using aviation turbine fuel will pay fuel duty. Helicopters will not be liable for aviation duty, but will be required to pay duty on fuel. Any aircraft making international journeys will be able to reclaim the fuel duty for the journey.

The second option that affects administrative burdens is to require airports to collect the new duty from airlines on behalf of HM Revenue and Customs, in combination with options a and b above. This is discussed in Chapter 6 of the consultation document.

2.0.6. There are also several different duty design options that do not significantly affect the administration burdens of the duty, but may have other social, economic and distributional impacts. These options have been assessed qualitatively. These are listed below with the relevant chapter from the Consultation Document:

- a. Metric used to assess tax liability of each flight, e.g. Maximum Take-Off Weight – see Chapter 2
- b. Whether the metric above will be used as a continuous scale or graduated into bands to assess tax liability. – see Chapter 2
- c. Metric used to determine the distance-based element of the duty – see Chapter 2
- d. Exemptions for specific categories of flight, e.g. air ambulances and military aircraft – see Chapter 4

2.0.7. All the issues above are looked at in more detail in the remainder of the Impact Assessment. The document begins by looking at the introduction of the duty and some of the benefits and risks, then looks at the different options. It begins with the extent to which general and business aviation are included in the duty and also the possibility of having airports as the duty collector in sections 2.1 and 2.2, there are administrative burdens estimated for both these options. The Impact Assessment then looks more qualitatively at the metric for the duty (section 2.3), how it might be calculated (section 2.4) and the possible distance metrics which could be used to more closely correlate the duty to distance travelled (section 2.5).

### **‘Do nothing’ Scenario – The base line to assess options against**

2.0.8. To understand the impact of each of these options they must be compared against a ‘do nothing’ scenario for the aviation industry, which is the base line against which comparisons are made. The ‘do nothing’ scenario used in this Impact Assessment is the continuation of air passenger duty with an increase in rates on 1 November 2009 that will raise an additional £520 million in a full year.

2.0.9. This document looks at the impact of changing the structure of taxation on different sectors, and overall on the industry rather than at the impact of increasing the burden of taxation on the aviation industry as a whole. Respondants to the consultation are asked to consider the change in structure of the duty and the impacts the different design options may have on the industry, where possible, providing evidence for these impacts.

## **2.1. Introduction of a new aviation duty**

### **How an aviation duty will work**

2.1.1. There are several design options discussed in this document which will impact on how a per flight duty will operate. However, it is useful to explain in more detail a particular case of how it may work. This is only one possible illustration of what the final duty may look like and respondents to the consultation are asked to comment on this example, along with all other design options.

#### *Administration of duty*

The new duty will be administered in a similar way to air passenger duty. All taxpayers will register with HMRC, either directly themselves or indirectly through a UK based fiscal representative, and complete monthly returns declaring their tax liability over the previous accounting period. The duty due will then be paid to HMRC during the following accounting period; it is assumed this is done on a monthly basis for the estimation of administration burdens below. Some taxpayers may use a third party for the processing of their tax liability, for instance an aircraft management company or

accountant. All taxpayers will be required to keep records of their flight details so that HMRC can assure compliance with the duty and regularly audit tax payers.

### *Calculating Tax Liability*

The tax liability will accrue each time an aircraft takes off. The operator of the aircraft will be liable for the duty. The tax liability will be calculated depending upon the metric chosen and distance flown. Further details of this are discussed in chapter 2 of the main text and in sections 2.3 to 2.5 below.

### *Rates of Duty*

Decisions on rates of duty will not be made until after consultation, and depend upon other design options. However, to give an idea of the magnitude of rates given the Government's objective to raise a specified amount of revenue the average tax liability for a flight will be of the same order of magnitude under the new duty as it is currently for APD. However, there will be distributional changes, with some operators paying more and some paying less to better reflect the environmental impact of a flight. Current APD rates for an economy class flight within the EU are £10 per passenger and outside the EU are £40. However, decisions on rates will take in to account many factors, and this illustration does not prejudice the outcome of those decisions.

2.1.2. Decisions on the metric used to determine the tax liability will be made after consultation. However, it is useful to consider an example which illustrates how the duty could work. This can then be compared to the tax liability under air passenger duty. See Chapter 2 of the main text and sections 2.3 to 2.5 below for a discussion on these issues.

### **Example of rate structure**

2.1.3. Examples of the rate structure for the duty, and how this compares to air passenger duty are given in Chapter 2, boxes 2.1 and 2.2, of the main text for large planes carrying different loads and of different weights.

### **Benefits of per-flight duty**

2.1.4. The following section looks at the major benefits of aviation duty in better aligning the duty to environmental impacts. Respondents to the consultation are asked to comment and provide evidence on the quantitative impacts, including the reduction in carbon emissions from these impacts.

### *Aviation duty rewards operations with a lower environmental impact*

2.1.5. A central aim of the new aviation duty is to send a signal through taxation that is better correlated with environmental impacts, compared to air passenger duty. Under the current duty system, two identical aircraft with the same environmental impact can pay very different amounts of duty, depending upon how many passengers they carry. In example 1 in Chapter 2 of the main text, the tax liability of the more heavily loaded plane is twice that of the other, even though their environmental impact is the same. Under aviation duty, these two planes will have the same tax liability, reflecting their equal environmental impact.

2.1.6. This realignment of the duty to reflect environmental impact occurs even if the duty is only based on maximum take-off weight. If the duty is also based on some environmental characteristic of the flight then this could reward airlines using cleaner and more efficient aircraft further. For example, if an aircraft achieves a particular environmental target it may receive a reduction in the tax liability. This is discussed in Chapter 2 of the main text and section 2.3 below.

2.1.7. Under air passenger duty, a passenger flying to a destination just outside of the EEA will have the same tax liability as someone flying to a much further destination. Using a more refined system to

better reflect distance travelled in calculating aviation duty will again better align the environmental impact to tax liability. This is discussed in Chapter 2 of the main text and section 2.5 below.

#### *Encourages the use of appropriate capacity and higher loading factors*

2.1.8. Air operators have very large economic incentives to use appropriately sized planes on their routes and ensure they have high loading factors on their flights. This is because of the large fixed costs of each flight, for instance the costs of fuel and landing charges that mean carrying excess capacity does not make good business sense. These incentives have recently increased considerably with the rise in the price of oil. Air passenger duty is not aligned with these incentives and the Government believes that the new aviation duty can further encourage this behaviour.

2.1.9. For instance, in example 2 of Chapter 2 in the main text, the two planes are both carrying the same number of passengers and so pay the same amount of air passenger duty. There may be other factors which the airline believes are important for maintaining the capacity of the route at the higher level. However, under air passenger duty there would be no reduction in tax liability from reducing the size of plane used to carry these passengers. With an aviation duty, airlines that do choose a smaller plane in this situation, or who choose to reduce capacity in some other way, would be rewarded with a reduction in duty. The Government believes it is right that taxation should be better aligned with these incentives and that a shift to aviation duty achieves this, which may encourage this behaviour.

#### *Inclusion of more aviation sectors within the duty*

2.1.10. One of the aims of aviation duty is to increase the scope of aviation taxation. Currently certain types of flight are not taxed by air passenger duty:

- Aircraft carrying freight, but not passengers
- Aircraft flying without passengers, for instance for positioning flights
- Commercial air services using planes with under 20 passengers or under 10 tonnes.
- Aircraft used for private transport

2.1.11. It is fair that these aircraft are brought within the scope of taxation such that these sectors contribute their fair share to funding public services and that aviation duty is correlated better with environmental damage.

#### **Risks/issues with per-flight duty**

2.1.12. This section looks at some of the risks and issues of the aviation duty, which are also highlighted in the consultation document. Here, these issues are explored in more detail and are the current understanding of the likely impacts. They are only assessed on a qualitative basis and it is unclear whether these will be significant impacts. Respondents to the consultation are asked to provide further evidence to allow a quantitative assessment of these issues, and to highlight other risks and issues not covered here.

#### *Increase in Administrative Burdens*

2.1.13. With a potential increase in the number of taxpayers within the scope of the new aviation duty there will be a potentially large increase in the administration burden for businesses and individuals and for HMRC. An additional burden will come if some of the duty design options are more complex than under APD. Respondents to the consultation are asked to consider whether the assessment of the administration burden impact below is reasonable.

## *Impact on transfer passengers*

- 2.1.14. The issue of transfer passengers is introduced in Chapter 5 of the main text.
- 2.1.15. With aviation duty, depending on how the duty is passed on to passengers, transfer passengers may have to contribute towards the taxation cost of a flight. Under APD this is not the case and so effectively, this may raise the cost of transferring via a UK airport on long-haul journeys compared to other internationally competing airports. This will be the case for passengers transferring at UK airports whether their journeys begin in the UK or internationally. This may reduce the number of transfer passengers using UK airports, although the number of such passengers will not decline as they may instead transfer through other countries.
- 2.1.16. Some stakeholders have argued that transfer passengers are important for bringing additional revenue to routes that would otherwise not be profitable, and that they therefore contribute to the availability of particular routes, and the frequency of services, which reduce travelling costs and give the UK an advantage in attracting international business. The move to aviation duty may therefore have a negative impact on UK airports and businesses.
- 2.1.17. However, the total revenue raised by the new aviation duty will be the same under any duty design option, and so the inclusion of transfer passengers implies a decrease in the burden for direct passengers. This will decrease the cost of flying from the UK and will offset some of the negative effects from any decline in transfer passengers and profitability of particular routes, although there may be some distributional changes with some airports and operators benefiting compared to others. It is unclear what the net impact of moving to aviation duty will be on the competitiveness of UK airports as a whole. Respondents to the consultation are invited to give their views on this issue and provide evidence as to the scale of these effects.

## *Impact on Air-Freight Industry*

- 2.1.18. The issue of the impact on freight is introduced in Chapter 5 of the main text.
- 2.1.19. It is unclear what the impact of aviation duty will be for freight carried as “bellyhold”. The average duty burden for a plane under aviation duty will be of similar magnitude to that under air passenger duty and so there should not be a large impact for airlines or exporters using “bellyhold” freight. However, some stakeholders have claimed that more of the tax burden on the plane will be passed on to freight customers than under air passenger duty.
- 2.1.20. Currently, aircraft that carry freight but not passengers will not pay air passenger duty. Therefore under aviation duty, airlines will have to pass on the cost of the duty to their customers. This will raise the cost of freight-only services in the UK, compared to services that use “bellyhold” freight and relative to services that may first transport goods to airports outside the UK. However, these other sectors already contribute to taxation revenue in some way, and so this change may simply be correcting an existing distortion in tax treatment.
- 2.1.21. Some of the air-freight that is carried from the UK does not originate here but is in transit and taking advantage of UK freight-hubs. These hubs, for instance Nottingham East Midlands Airport and Heathrow, receive freight from around the world, sort and process it, before dispatching it to its final destination, taking advantage of the connectivity of UK airports. The inclusion of freight services within aviation duty may make the UK a less competitive hub, particularly for freight-only services, and may lead to the switching of some of this business to international competitors.
- 2.1.22. As with the passenger transfer sector, the inclusion of freight within aviation duty reduces the burden on other sectors, such as direct passenger services, which will benefit those sectors. It is unclear whether the net impact on the aviation sector and UK business as a whole is negatively affected by these changes. Respondents to the consultation are invited to give their views on this issue and provide evidence as to the scale of these effects.

## *Impact on long-haul operations from the UK*

2.1.23. For many long-haul destinations there is a choice of routes, with some flying direct and some stopping at an intermediate point, for example, flying to Singapore directly, or via Dubai. Under air passenger duty, the tax for carrying passengers from the UK depends on the final destination, and not on whether there is an intermediate stop. With an aviation duty, the duty will only be calculated to the first destination. Depending upon the decision for the metric used to calculate distance travelled, this might mean that an aircraft flying direct to a long-haul destination will pay more in duty than an aircraft that uses an intermediate hub. This means the tax burden for airlines that tend to fly direct, may be higher than airlines that fly via intermediate hubs. For regional passengers flying via a UK hub to a long-haul destination will mean two taxable legs, whereas using a non-UK hub will involve only one taxable leg. These costs may reduce regional passengers using UK hubs further affecting the availability and frequency of some regional routes. Respondents to the consultation are invited to give their views on this issue and provide evidence as to the scale of these effects.

### *Increased complexity of fairly allocating duty to passengers*

2.1.24. Air passenger duty is based on the carriage of passengers and therefore it is simple for airlines to allocate the duty to each individual passenger when setting air fares. The number of passengers does not affect aviation duty, which makes it more similar to other costs of operating a flight such as landing charges and fuel. Some stakeholders have argued that this could make it more difficult to calculate the tax liability of individual passengers and pass on this duty to their customers in a fair way. However, it is unclear whether it will be more difficult to do this with aviation duty than with other charges and costs, such as for landing and fuel. Respondents are asked to provide more evidence on the difficulties that airlines may face in this regard and what impact it will have.

## **General Aviation and Administration Burden**

2.1.25. The issue of General Aviation, including the energy products directive and fuel duty, is introduced in Chapter 3 of the main text.

2.1.26. There are two main options for aviation duty regarding the scope of general aviation included in the duty which offer solutions to including all aircraft within aviation duty which produces very high administration burdens as highlighted below. These options are:

Option a - All aircraft over 5.7 tonnes taking off in the UK will be liable for the new aviation duty. All aircraft using aviation gasoline and aircraft under 5.7 tonnes using aviation turbine fuel will pay fuel duty. Helicopters will not be liable for aviation duty, but will be required to pay duty on fuel. Any aircraft making an international journey will be able to reclaim the fuel duty for the journey.

Option b - All aircraft taking off in the UK operated by operators with type A or type B licenses will be liable for the new aviation duty. All aircraft using aviation gasoline and all other aircraft not operated by type A or B operators using aviation turbine fuel will pay fuel duty. Helicopters will not be liable for aviation duty, but will be required to pay duty on fuel. Any aircraft making international journeys will be able to reclaim the fuel duty for the journey..

2.1.27. The administration burdens below are an illustration of how the costs to the industry could be significantly reduced by limiting the tax base. Option b) is not included in the analysis as there are a number of issues related to restricting the registration for the duty to only type A or B license holders. These issues highlight why option a) is the Government's lead option. Please refer to the Consultation Document, chapter 3, for a discussion of these issues. It should be noted however that it is likely that option b) would produce similar levels of admin burden saving.

## *Administration Burdens*

2.1.28. An important impact of aviation duty is the administrative burden for taxpayers and for HMRC of assessing tax liabilities and making tax returns. In particular, the Government has an objective to reduce the impact of regulation on small businesses. The following section looks at the impact of the options on the administrative burden of aviation duty, compared to the current system for air passenger duty. The costs are higher mainly because of the larger number of taxpayers. These are estimates based on our best knowledge of the industry. Respondents are asked to consider whether these estimates represent a realistic assessment of the likely administrative burden of aviation duty.

## *Administration Burden Estimation Methodology*

2.1.29. In the current case of APD, most taxpayers are large businesses, although some smaller firms are included. Under the new aviation duty, there will be two additional groups of tax payers; the self-employed and private individuals. The administration burdens for industry and individuals of the new aviation duty are calculated based on two distinct obligations which all businesses will have to carry out in order to pay the duty. The first of these obligations is the cost to businesses of having to file returns containing all of the relevant information to HMRC. The second part of the administrative burden is the cost that these businesses face in having to keep records of all this information over time in case of audit or investigation. It is assumed that the record keeping is carried out with the filing of returns and therefore the costs are calculated together.

2.1.30. With APD, airlines have to file returns on a monthly basis. In these returns they are obliged to report details on the number of passengers carried in economy or non-economy and travelling to EEA or non-EEA destinations. As well as this, the airlines must record the total number of passengers exempted from APD and the total number of passengers flown over that month. They must then calculate the total duty due for the period as well as any under or over declarations from the previous period and add these to the return. All this information must be recorded and stored in case of audit.

2.1.31. For the estimates of the new aviation duty, the returns are here expected to be on a monthly basis and the operators will have to record information on the number of flights undertaken, the chosen tax base (see Chapter 2 of the Consultation document and section 2.3 below), as well as the destination in order to be able to return the information to HMRC. They will then have to aggregate the information and calculate the tax due and return this information to HMRC.

2.1.32. It is assumed in these estimates that for the larger businesses that currently pay APD, the cost per business of filing a return to HMRC and keeping records will remain the same under the new aviation duty. This assumes that the information that needs to be returned to meet the requirements of the new aviation duty is already kept and recorded by the aircraft operators for their own purposes and to meet other information requirements, for instance to the CAA. Therefore the processes that each business must go through in order to file a return and keep records will be similar to what they currently do under APD. HMRC follows a standard process for calculating the administrative burden of all taxes. Essentially, the administrative burden of a tax is calculated by working out a per business cost for each obligation a business must undertake and scaling that up by the frequency of the obligation and by the population of each type of business. This process is explained for air passenger duty below, with those results used to estimate the impact of aviation duty. The costs for air passenger duty are derived from the HMRC admin burdens database. More information on administration burdens can be found on the HMRC website at: <http://www.hmrc.gov.uk/better-regulation/admin-burdens.htm>

## *Per business Internal costs*

2.1.33. Businesses may choose to process returns internally or outsource the task. The internal costs are calculated from the amount of time taken by employees to carry out certain tasks necessary to meet the taxpayer's obligations. The tasks that these employees face include familiarisation with all

the data, retrieval of all the necessary information from their detailed records, assessment of the information, calculations, checking, copying and filing. The total time taken for these tasks depends upon the size of business. The table below gives estimates of the amount of staff time used to file a return for air passenger duty in different sized companies. Here a small business is considered to have less than 50 employees, and a large business more than this.

Business size	Total Time taken to file a return
Small Businesses	7 - 9 hours
Large Businesses	13 - 17 hours

2.1.34. The amount of time spent carrying out these different tasks is then multiplied by a relevant wage rate which derives an average total internal cost of filing a return for each sized business.

*External and acquisition costs*

2.1.35. External costs only apply to those companies who outsource their processes to external agents. In the case of air passenger duty, anecdotal evidence suggests that the smaller taxpayers outsource to large taxpayers. This is assumed to remain the same under the new aviation duty. As in the case of the internal costs, the external costs per business show the estimated cost that a company would face from outsourcing the process each month. The main acquisition cost to businesses is for software, which is assumed to reoccur annually, perhaps because of a licensing agreement or software updates.

*Frequency*

2.1.36. In order to calculate the annual costs to a business, these costs per return must be multiplied by the frequency of returns over the year. In the case of APD this will be monthly so the per return cost is multiplied by 12 to calculate the annual business admin burden. Monthly returns are also assumed for aviation duty in calculating the admin burdens. However one way to reduce burdens could be to require returns quarterly or annually. The table below shows the estimated per business cost of filing a return. Respondents to the consultation are asked to consider whether these are a reasonable estimate of the likely costs of administering aviation duty.

Business size	In-house costs	Outsourcing costs	Acquisition costs (software)
	Annual	Annual	Annual
Small	£2,000 - £2,500	£5,000 - £7,000	£0 - £100
Large	£3,000 - £4,000	£15,000 - £20,000	£300 - £500

Note: The software acquisition costs only apply to these companies carrying everything out in house and external costs only apply to those outsourcing

*Self-Employed and Individuals*

2.1.37. There are currently no self-employed or private individuals who pay air passenger duty, although there may be some of these groups under aviation duty in some scenarios. There are no currently available estimates of the administration burden for these groups. It is assumed that self-employed businesses will have the same time burden as the smallest firm under air passenger duty. Private individuals are assumed to fly less frequently than businesses and therefore will have less information they will have to collate and return. For this reason it is assumed that individuals will face half the time burden of the self-employed. It is assumed that neither the self-employed nor individuals would face any outsourcing or software acquisition costs because the level of their activity would not warrant spending money on these services. These self employed firms and private individuals will also face a new burden in having to keep records of all the flights they make. These costs are likely to be larger than other businesses involved in aviation as they will not have any of the systems in place. The time taken and total costs for self-employed and private individuals is shown in the table below

Operator size	Hours Filing returns	Hours Record keeping	Total Internal costs
	Monthly	Monthly	Annual
Individuals	3-5 hours	1-2 hours	£600-£700
Self employed	6-10 hours	1-2 hours	£1000-£1200

#### *Rebate for international fliers who pay fuel duty*

2.1.38. For option a and b, there will be an additional administration burden for businesses and individuals claiming a rebate on fuel duty paid for international journeys. In these options fuel duty will be paid on all Aviation Turbine fuel bought for aircraft under 5.7 tonnes. Fuel duty is already paid on Aviation Gasoline and this situation will not change under these options. The increase in burden on business of claiming a rebate will be negligible in comparison to the burdens of filing for aviation duty.

#### *Total Admin Burdens*

2.1.39. Using the annual per business cost for each obligation we can then work out the total cost to the industry of the new duty options by multiplying these costs by the relevant populations of taxpayers affected under each option. The table below gives estimates of the total administration burden to business and the burden falling on individual taxpayers for including all aircraft compared to option a. The net cost of these options will include the removal of the existing burden for air passenger duty which is shown in the summary sheets at the front of the Impact Assessment. Respondents to the consultation are asked to consider whether these are a reasonable estimate of the likely costs of administering aviation duty.

	Counterfactual - APD	Option a – aircraft > 5.7tonnes	All aircraft
Number of large businesses	190	700	1,100
Number of small and self- employed businesses	100	400	4,300
<b>Total Admin Burden impact for Businesses</b>	<b>£2m</b>	<b>£5 – 8m</b>	<b>£21 - £29m</b>
Number of individuals	0	50	7,100
<b>Total Burden for individuals</b>	<b>£0</b>	<b>£20 – 40k</b>	<b>£4 - 6m</b>
<b>Total Cost</b>	<b>£2m</b>	<b>£5 - 8m</b>	<b>£25 – 35m</b>

#### *Set up costs of aviation duty*

- Businesses

2.1.40. The aviation industry will face set up costs in order to get their systems ready for the introduction of the new aviation duty. These set up costs could include new IT systems, familiarisation with the new regulations and measures, training staff in the details of the new duty and new pricing and ticketing systems. Respondents to the consultation are asked to consider these set up costs and provide estimates of how much it is likely to cost their business to prepare for aviation duty.

- Individuals

2.1.41. As well as businesses needing to get ready for the introduction of the new aviation duty, there are also many individuals who will now be captured by the new duty. Individuals are less likely to face such large costs of getting set up to pay this duty, however they will have to spend time familiarising themselves with the new rules and the information which they need to report. They are unlikely to need sophisticated IT systems or to undertake training. Respondents to the consultation are asked to consider these set up costs and provide estimates of how much it is likely to cost to prepare for aviation duty.

### *HMRC costs of aviation duty*

2.1.42. The HMRC costs per business are assumed to be broadly the same for aviation Duty as they are currently under APD. These costs will include the registration of all the taxpayers, processing all the returns, error correction, risk management, compliance and audit work. As the costs per business are assumed to remain constant under all the options, the population of taxpayers that HMRC has to deal with will be critical in calculating the cost to the department of the new duty. For this reason, option a) will cost HMRC less than including all aircraft in aviation duty, although there will be an increase in the quantity of fuel duty rebates expected.

### **Scope of duty**

2.1.43. The following table shows the scope of the new duty in extending the coverage of aviation duty. This is measured firstly in terms of the proportion of all flights made that take-off from the UK. Secondly, it is possible to calculate the total tax base using one of the metrics discussed in chapter 2, here maximum take-off weight is used. The total tax base is therefore a product of the number of flights, and the maximum take-off weight of each flight; the distance related element of the duty is not included here. This is then compared with the proportion of flights included under each of the options. These calculations are taken from the latest CAA flights data with assumptions made by HMRC to account for flights that are made from non reporting airports and by smaller aircraft. Data on maximum take-off weight is taken from the G-Info database of UK registered aircraft with an average taken across aircraft models to account for foreign registered aircraft not captured within the database.

	'Do nothing' - APD	Option a	All Aircraft
Proportion of flights covered by duty	35-40%	40-50%	100%
Proportion of tax base within duty	85-90%	92-97%	100%

Note: These figures are for APD or aviation duty only. Under APD and option a), a much higher proportion of flights will be required to pay fuel duty, if not the aviation duty specifically.

The proposals under option a) and b) are that all aircraft under 5.7 tonnes or not holding at type A or B license will pay fuel duty irrespective of fuel used where permitted under international law, therefore the proportion of flights covered by some form of taxation will be much higher.

## **2.2. Require airports to collect duty on behalf of HMRC**

2.2.1. This option is described in more detail in Chapter 6 paragraphs 6.6 to 6.14 of the main text.

### **Benefits of Airports Collecting Duty**

2.2.2. The benefits of using airports to collect the duty would be lower administration burdens for business overall.. Many aircraft operators are already reporting the information needed to administer the duty to airports and therefore there would be a negligible increase in the administration burden for aircraft operators. It is assumed in these calculations that there will be no increase but the Government recognises that there maybe additional costs for both the airports and aircraft operators and therefore this is likely to be an underestimate. However, there will obviously be a switch in the burden from air operators to airports. The next section estimates the savings in admin burden, compared to the options above Respondents are asked to consider both the costs and benefits of this option, and provide more evidence to refine the estimates provided.

### **Administrative Burden**

2.2.3. Airports are assumed to face the same type of admin burdens as the aircraft operators in returning the information to HMRC, namely filing returns and record keeping. For these estimations it is assumed that there will be no additional burden for the aircraft operators under aviation duty because they already report the information required to airports for other charges and therefore will continue to do so. The administration burden will arise from airports having to record taxpayer information, collect revenues, collate and keep records of all the information in order to file the returns, and assist in registering some taxpayers.

#### *Administration Burden Methodology*

2.2.4. Using the 142 licensed airports as tax collector for HMRC may involve airports collecting and recording information from their systems and from the operators so that they can return the appropriate information to HMRC. The type of information which might be needed is the number of flights, the chosen tax base for each aircraft, the destination of the aircraft's first stop as well as the taxpayers registration numbers so that HMRC can identify the operators when the airports return the information.

2.2.5. The airports may already have a lot of this information as they collect a wide range of data for other charges and for the CAA, but under this option they will need to record all the information for HMRC as well, collect revenues and register some taxpayers. Therefore, although the airports might have to go through similar processes as the aircraft operators in options a and b above, it is likely to take them longer because of the need to collate the information for many different operators rather than just one.

#### *Per Business Internal costs*

2.2.6. The processes which the airports are expected to go through to meet their obligations in filing returns and record keeping are assumed to be the same as those which the aircraft operators would have to go through. These include familiarisation with all the data, retrieval of all the necessary information from their detailed records, assessment of the information, calculations, checking, settlements, copying and filing. The total time taken for these tasks depends on the size of the business.

2.2.7. Airports will also have to record details of the taxpayer for each flight, and may have to register some taxpayers, for instance, a non-UK plane entering the UK for the first time. Therefore, it is assumed that these processes will take longer for airports, by a factor of 25% for option a, and 50% for the option of taxing all aircraft because a larger number of flights are included. The increase in costs is assumed to be less than proportional to the increase in number of operators dealt with because the airports may already have processes in place for collecting this information for other purposes so would already have a lot of the information available and there will be a time saving because of this. These times for filing a return are a key assumption in the calculation of the admin burden benefit for the option of using airports to collect the duty and respondents to the consultation are asked to consider whether the time burdens estimated below are reasonable. (Small businesses are assumed to have less than 50 employees and large businesses more than 50.)

Company size	Total Time taken to file a return	
	Airports - Option a	Airports – All Aircraft
Small businesses	9 – 11 hours	11 – 14 hours
Large businesses	15 - 20 hours	20 - 25 hours

2.2.8. Multiplying by the appropriate wage rate from the standard cost model derives a per business internal cost of filing a return which are shown in the table below.

*External and acquisition costs:*

2.2.9. The external costs are also assumed to increase under the new aviation duty because for each airport the amount of data and information which they are outsourcing is likely to be larger than for each airline. The costs are assumed to rise by the same percentages as the internal costs for each option (hence 25% for option a and 50% when all aircraft are included).

2.2.10. The main acquisition cost for airports is expected, like operators, to be for software which reoccurs annually. This cost is assumed to be similar to that required by air operators above. The table below shows the external and acquisition costs for the airports collecting the duty.

*Frequency*

2.2.11. In order to calculate the annual costs to a business, these costs per return must be multiplied by the frequency of returns over the year. In the case of aviation duty this will be monthly so the per return cost is multiplied by 12. The table below show the estimated per business cost of filing a return. Respondants to the consultation are asked to consider whether these are a reasonable estimates of the likely costs of administering aviation duty.

Business Size	Internal costs	External costs	Acquisition costs (software)
	Annual	Annual	Annual
<b>Airports – Option a</b>			
Small	£2,500-£3,000	£6,000 - £9,000	£100
Large	£4,000-£5,000	£19000 - £25,000	£300-£500
<b>Airports – All Aircraft</b>			
Small	£3,000-£4,000	£7,500 - £10,000	£100
Large	£5,000-£6,000	£22,000 - £30,000	£300-£500

Note: The software acquisition costs only apply to these companies carrying everything out in house and external costs only apply to those outsourcing

**Total administration burden**

2.2.12. We now have an estimate for the total cost per business for each of the options being proposed and in order to calculate the total cost to the industry each year, the population of each size of business is multiplied by the annual per business cost. Using the population of 142 licensed airports we can estimate the total cost to the industry of airports collecting the new aviation duty for HMRC. It is assumed that there are 30 small businesses and 112 large businesses.

	'Do nothing' - APD	Airports - Option a > 5.7	Airports – All Aircraft All aircraft
Number of large businesses	190	112	112
Number of small businesses	100	30	30
<b>Total Admin Burden impact for Businesses</b>	<b>£2m</b>	<b>£1.0-1.2m</b>	<b>£1.3-1.5m</b>
Number of individuals	0	0	0
<b>Total Burden for individuals</b>	<b>£0</b>	<b>£0</b>	<b>£0</b>
<b>Total Burden</b>	<b>£2m</b>	<b>£1.0-1.2m</b>	<b>£1.3-1.5m</b>
Comparison to burdens if operators and individuals pay duty directly to HMRC.	N/A	£5-8m	£25-35m

#### *Set up costs*

2.2.13. As with the option of collecting the duty directly from aircraft operators, there will be set-up costs to the airports if they are used as the tax collector for HMRC. They may need new IT systems to cope with the new requirements, there may be training needed for their staff, time to familiarise themselves with the new regulations and there will need to be some work to put in place ways to collect the duty from the operators. Respondents to the consultation are asked to consider these set up costs and provide estimates of how much it is likely to cost their business to prepare for aviation duty.

#### *HMRC costs of aviation duty*

The HMRC costs for this option are assumed to be lower than those for collecting directly from air operators, due to the much smaller taxpayer population and the reduced need for processing returns.

### **Risks and Issues**

#### *Avoidance by using non-licensed airfields*

2.2.14. There are around 2,000 non-licensed aerodromes in the UK that could potentially be used by air operators seeking to avoid paying aviation duty at licensed airports under the option of using airports to collect the duty. It is understood that not many of these aerodromes would be suitable for fixed-wing aircraft over 5.7 tonnes, and therefore avoidance opportunities would be limited under option a). Respondents are asked to consider whether this would be a problem under the option of using airports to collect the duty..

## 2.3. Metric used for assessing duty liability

2.3.1. This option is discussed in Chapter 2, paragraphs 2.4 to 2.23, of the Consultation Document, which look at the following options:

- a. Use Maximum Take-Off weight (MTOW)
- b. Use LTO NO<sub>x</sub>
- c. Use LTO CO<sub>2</sub>

2.3.2. The options considered are listed below. Respondents are asked to comment on the assessment of these metrics, and if there are alternatives that should also be considered.

Option	Benefits	Risks/Issues
a. Use Maximum Take-Off Weight	<ul style="list-style-type: none"> <li>▪ Easily obtained, recorded for every registered aircraft, well understood by the aviation industry.</li> <li>▪ Good correlation with environmental impact of a plane's flight.</li> <li>▪ Simple calculation.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Not strictly linearly related to environmental impact. The same aircraft may have different environmental impacts, for instance because of engine age, but be taxed the same amount.</li> <li>▪ Re-registration of aircraft with lower MTOW is possible.</li> </ul>
b. Use LTO NO <sub>x</sub>	<ul style="list-style-type: none"> <li>▪ Rewards investment in low LTO NO<sub>x</sub> engines.</li> <li>▪ Has precedence for use as a tax base in Sweden.</li> <li>▪ Good correlation between the NO<sub>x</sub> emissions of an aircraft during the LTO cycle and over the rest of the flight.</li> <li>▪ Reasonable correlation between LTO NO<sub>x</sub> emissions and CO<sub>2</sub> emissions of a flight.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Assuring data may be difficult</li> <li>▪ To what degree would airlines change their fleet decisions rather than moving their dirtier planes off UK routes?</li> </ul>
c. Use LTO CO <sub>2</sub>	<ul style="list-style-type: none"> <li>▪ Rewards investment in low carbon dioxide LTO technology.</li> <li>▪ Strong correlation between the CO<sub>2</sub> emissions of an aircraft during the LTO cycle and over the rest of the flight.</li> <li>▪ Reasonable correlation between LTO CO<sub>2</sub> emissions and NO<sub>x</sub> emissions of a flight.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Assuring data may be difficult</li> <li>▪ Some overlap with EU ETS, also based on cutting CO<sub>2</sub>.</li> <li>▪ To what degree would airlines change their fleet decisions rather than moving their dirtier planes off UK routes?</li> </ul>

### Summary

2.3.3. Maximum take-off weight will provide a good correlation to environmental damage and will be a relatively simple metric to use to calculate liability. However, it is recognised that there are anomalies with this metric, and respondents are asked to provide further evidence about the alternatives suggested here and other possible systems in line with the overall objectives of the duty.

## 2.4. Banding or continuous scale for environmental metric

2.4.1. The various possible metrics used to determine the rate of duty in the new aviation duty - be it MTOW or NOx/CO2 in the LTO cycle - may be used on a continuous scale or graduated using some form of banding (as with cars, which are graduated for vehicle excise duty based on their CO<sub>2</sub> emissions.) For instance a 100 tonne aircraft may be charged in the following way (assuming that maximum take-off weight is used as the tax base), and that there is no distance-based element to the charge.

2.4.2. Measurement on a continuous scale will take the exact value for the metric in each case and calculate the duty due on the basis of it, e.g. 100 x £T.

2.4.3. Banding will assign fixed rates to aircraft that fall within a range of measures for a particular metric, e.g. aircraft between 80 and 100 tonnes pay a fixed rate of £Z.

Option	Benefits	Risks/Issues
<ul style="list-style-type: none"> <li>▪ Use continuous scale</li> </ul>	<ul style="list-style-type: none"> <li>▪ All tax payers will pay proportionally according to the metric and so tax liability will better correlate with environmental impact.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Tax liability may be different for even similar planes in a fleet. This may be difficult to record, calculate and assure.</li> <li>▪ The relationship between environmental impact and values of a metric are unlikely to be linear, so using a continuous scale will distort the alignment of the duty to the environmental impact.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Use Banding</li> </ul>	<ul style="list-style-type: none"> <li>▪ Simplify the way the duty is calculated by reducing the number of possible rates.</li> <li>▪ Avoid distortions caused by extremes in values taken by a metric.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Many bands may be required to cover the whole spectrum of aircraft in the duty, from 5.7 tonnes 600 tonnes.</li> <li>▪ Using too many separate bands will mean setting of rates becomes cumbersome and open to criticism.</li> <li>▪ Some taxpayers will fall either side of a band and so will have different tax liabilities, but very similar environmental impacts.</li> </ul>

### Summary

2.4.4. Using a continuous function of the metric is the preferred approach here, however respondents are asked in the consultation to comment on this issue.

## 2.5. Metric used to assess distance based element of duty

2.5.1. This option is discussed in Chapter 2, paragraphs 2.24 to 2.30 of the Consultation Document. The following options are considered:

- a. Using Great circle distance
- b. Using geographical bands.

2.5.2. For many long-haul destinations there is a choice of routes, with some flying direct and some stopping at an intermediate point, for example, flying to Singapore directly, or via Dubai. With an Aviation duty, the duty may only be calculated to the first destination. Depending upon the distance option here this might mean that an aircraft flying direct to a long-haul destination will pay more in duty than an aircraft than uses an intermediate hub.

Options	Benefits	Risks/Issues
a. Making the duty proportional to great circle distance	<ul style="list-style-type: none"> <li>▪ Aligns closely to total emissions over the whole flight.</li> <li>▪ Readily available measure of distance.</li> </ul>	<ul style="list-style-type: none"> <li>▪ May be complex to record, calculate and assure tax liability.</li> <li>▪ There would be large differences between long-haul and short-haul journeys. This may encourage journeys to be broken unnecessarily at intermediate points. .</li> <li>▪ In reality aircraft fly further than the great circle distance due to airspace restriction and weather conditions etc.</li> </ul>
b. Geographical bands	<ul style="list-style-type: none"> <li>▪ Simple to calculate and assure; destinations will be clearly defined by band.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Not as closely aligned to total emissions over the whole flight.</li> <li>▪ Journeys to areas falling either side of a band may have different tax liabilities, but a similar distance.</li> </ul>

### *Summary*

2.5.3. The Government intends to correlate the aviation duty to distance to a greater extent than under air passenger duty. The option to use geographical banding is preferred, but respondents are asked for their views and further evidence.

## 2.6. Exemptions for specific categories of flight

2.6.1. Some of the possible exemptions that are being considered within aviation duty are presented in Chapter 4 of the consultation document. Respondents are asked to give their views and evidence of the case for any of the exemptions

## **3. Specific Impact Assessments**

### **3.0. Carbon and environmental Assessment**

3.0.1. Air passenger duty has an important impact on carbon dioxide emissions by reducing demand by passengers and the profitability of services, which together reduce the number of flights, compared to a situation with no such duty. The doubling of APD rates in February 2007, which raised an additional £1bn per year, will save between 0.7 to 1.8 MtCO<sub>2</sub> per year by 2010/11, with a central estimate of 1.1 MtCO<sub>2</sub>. These emissions may have a much greater impact when emitted at high altitude – a process called radiative forcing. This impact is evaluated in Sausen (2005), referred to Box 1.1, in Chapter 1 of the main text.

3.0.2. The further increase in revenue of £520m in 2010/11 announced alongside the change to aviation duty will also have an impact on carbon dioxide emitted of between 0.3 and 0.9MtCO<sub>2</sub> in 2010/11 with a central estimate of 0.5MtCO<sub>2</sub>. These emissions may also have a much greater impact when emitted at high altitude. In addition, aviation Duty will reward air operators with a lower environmental impact, as explained in the discussion of the options above. The switch to aviation Duty will cause some services to adjust loading factors or invest in more efficient technologies, which will lead to a reduction in carbon dioxide emissions. Further evidence is needed to understand the size of this impact, and until further decisions on duty design and rates are made it is not possible to produce a final estimate. Respondents are asked to provide evidence on the likely size of carbon dioxide savings from improving the efficiency of air operations from the UK.

### **3.1. Competition Impact Assessment**

3.1.1. The impact of the new aviation duty will depend upon the final duty design and the rates that are set. However, some of the design options of the duty lead to concerns that there will be an indirect limit on the number or range of suppliers in some markets, caused by a rise in costs for some existing suppliers relative to others. There are three areas where this may be a concern:

- Under some metrics used to assess the distance based element of the duty, there will be an increase in costs for some airlines to long-haul destinations that do not make intermediate stops, compared to those that do.
- There will be an increase in costs for transferring via UK airports compared to international competitors.
- There will be an increase in costs for using freight-only services compared to “bellyhold” services.

3.1.2. However, the new duty will also remove other distortions and this removal may lead indirectly to an increase in the number and range of suppliers. Primarily, airlines operating services with a lower environmental impact, for instance by carrying higher load factors, will see a decline in costs relative to competitors with a greater impact. Overall, the impact is unclear and respondents are asked to provide further evidence regarding the competition impact of aviation duty, under the different duty design options.

### **3.2. Small Firms Impact Assessment**

3.2.1. There are a large number of small firms, and self-employed individuals, in the aviation industry, in particular within the general aviation sector. These may range from small air charter firms, to aeroclubs offering flying tuition and providing a licensed airfield. The administrative burden on different sized-businesses is given in sections 2.1 and 2.2 above. The Government recognises the large costs that the new aviation duty will place on small businesses, as shown in the estimate for the administrative burden of including all planes with the scope of the new duty, as with option a.

3.2.2. Therefore, the Government recognises that to exempt all aircraft below 5.7 tonnes from the new duty, is preferred. This will remove most small firms and the self-employed from the administrative burden of the new duty. By requiring airports to collect the duty on behalf of HMRC, the burden on any remaining small firms would be reduced further, although offset by including some small airfield firms within the scope of the duty.

## **4. Conclusion**

4.0.1. The new aviation duty will achieve the aims set out by the Chancellor for aviation taxation. In particular, it will better correlate duty paid with the environmental damage of a flight, compared to air passenger duty. The Government believes this is a fairer basis on which to raise revenue from the aviation industry to pay for public services including public transport and the environment, and will also encourage the more efficient use of aircraft.

4.0.2. There will be other impacts from this change in taxation system, which will benefit some sectors of the industry and provide additional costs for others. The Government encourages industry bodies, organisations, companies and individuals affected by these issues to respond to this Impact Assessment and consultation to provide further evidence of these. Respondents are also asked to contribute to further understanding of the most appropriate way to assess the tax liability of each flight.

## Specific Impact Tests: Checklist

Use the table below to demonstrate how broadly you have considered the potential impacts of your policy options.

**Ensure that the results of any tests that impact on the cost-benefit analysis are contained within the main evidence base; other results may be annexed.**

Type of testing undertaken	<i>Results in Evidence Base?</i>	<i>Results annexed?</i>
Competition Assessment	Yes	No
Small Firms Impact Test	Yes	No
Legal Aid	No	No
Sustainable Development	No	No
Carbon Assessment	Yes	No
Other Environment	Yes	No
Health Impact Assessment	No	No
Race Equality	No	No
Disability Equality	No	No
Gender Equality	No	No
Human Rights	No	No
Rural Proofing	No	No





### Methodology used in Chapter 2 relating to Maximum Take-Off Weight

**C.1** The approximated weighted average distance travelled for each of the 62 aircraft was calculated using CAA 2005 data. The Government have used the European Environment Agency's CORINAIR Emissions Inventory Guidebook data<sup>1</sup> to calculate the Kg of CO<sub>2</sub> and Kg of NO<sub>x</sub> emissions per aircraft km (including LTO) for individual aircraft. This is an established, authoritative source of data on aircraft fuel burn rates, which provides separate values for the different stages of the flight such as landing and take off including taxiing and cruise emissions for different aircraft types<sup>2</sup>. MTOW has been taken from CAA 2005 data and relevant certification websites for aircraft. We uplifted the load factor for the CORINAIR data and assumed a 78.9 per cent load factor for each aircraft type.

**C.2** The following list sets out the aircraft that were used in the above analysis:

Airbus A300	ATR72
Airbus A310-300	Avro RJ100
Airbus A318	Avro RJ85
Airbus A319	Bae 146-200/Qt
Airbus A320-100/200	Bae 146-300
Airbus A321	Bae Jetstream 31
Airbus A330-200	Boeing 737-200
Airbus A330-300	Boeing 737-300
Airbus A340-200	Boeing 737-400
Airbus A340-300	Boeing 737-500
Airbus A340-600	Boeing 737-600
Airbus A350 pax	Boeing 737-700
Airbus A350-800	Boeing 737-800
Airbus A350-900	Boeing 737-900
Airbus A380 pax	Boeing 747-200B
ATR42-300	Boeing 747-300

<sup>1</sup> European Environment Agency's CORINAIR methodology for estimating aviation fuel burn by specific aircraft types. See Annex B for more information

<sup>2</sup> It is assumed that fuel burn on a 100% loaded jet aircraft will be 5% higher than on a 70% loaded aircraft, due to the increased weight. See Daggett, D. L., D. J. Sutkus Jr., D. P. DuPois, and S. L. Baughcum, 1999: *An evaluation of aircraft emissions inventory methodology by comparisons with reported airline data*. NASA/CR-1999-209480.

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Boeing 747-400	De Havilland Dash 8 -300
Boeing 747-400 (Combi)	Dornier 328
Boeing 747-800	EMB-135
Boeing 757-200	EMB-ERJ145
Boeing 757-300	Embraer 170
Boeing 767-200	Embraer 190
Boeing 767-300	Executive Jet Chapter 3
Boeing 767-400	Fokker 100
Boeing 777-200	Fokker 50
Boeing 777-300	Fokker 70
Boeing 787 all pax models	MD DC-10 30/40
Bombardier C Series	MD11
Bombardier RJ100/200	MD80
Bombardier RJ700	MD90
De Havilland Dash 8	Saab Fairchild 340

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# D

## INFORMAL CONSULTATION PROCESS

### Informal discussions to date

**D.1** The Government has already been through an informal consultation process and has met with a number of industry bodies, including:

- Airport Operators Association (AOA)
- Air Transport Association (ATA)
- Association of International Couriers and Express Services (AICES)
- Board of Airline Representatives in the UK (BAR-UK)
- British Air Transport Association (BATA)
- British Business and General Aviation Association (BBGA)
- British Helicopter Advisory Board (BHAB)
- British International Freight Association (BIFA)
- CAA
- European Low Fares Airline Association (ELFAA)
- Federation of Tour Operators (FTO)
- Freight Transport Association (FTA)
- International Air Transport Association (IATA)
- Popular Flying Association (PFA)

**D.2** The Government has also met with a number of individual organisations including:

- American Airlines
- BMI
- Continental Airlines
- DHL
- Easyjet
- FedEx
- Flybe
- Jet 2
- Lufthansa
- Ryanair
- Thomas Cook
- UPS
- Virgin



# E

## DISTANCE - GEOGRAPHICAL BANDS

**E.1** In Chapter 2, the Government set out a proposal for using a distance factor within the new aviation duty, and suggested that the rate of the duty would, in addition to an aircraft measure, be determined by the geographical band that an aircraft flies to. The Government has made a suggestion for three potential bands – and the details of these, along with a list of destinations that would fall within the bands, are set out below.

### **Band A – European Economic Area and other countries within the existing lower rate of air passenger duty**

Country/Territory	Capital City
• Albania	• Tirana
• Austria	• Vienna
• Belgium	• Brussels
• Bosnia & Herzegovina	• Sarajevo
• Bulgaria	• Sofia
• Croatia	• Zagreb
• Cyprus	• Nicosia
• Czech Republic	• Prague
• Denmark	• Copenhagen
• Estonia	• Tallinn
• Finland	• Helsinki
• France	• Paris
• Germany	• Berlin
• Greece	• Athens
• Hungary	• Budapest
• Iceland	• Reykjavik
• Ireland	• Dublin
• Italy	• Rome
• Kosovo	• Pristina
• Latvia	• Riga
• Lithuania	• Vilnius

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• Luxembourg	• Luxembourg
• Malta	• Valletta
• Montenegro	• Podgorica
• Netherlands	• Amsterdam
• Norway	• Oslo
• Poland	• Warsaw
• Portugal	• Lisbon
• Romania	• Bucharest
• Serbia	• Belgrade
• Slovenia	• Ljubljana
• Slovakia	• Bratislava
• Spain	• Madrid
• Sweden	• Stockholm
• Turkey	• Ankara

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### **Band B – Outside of the EEA, but less than 3,000 miles from London**

<b>Country/Territory</b>	<b>Capital City</b>
• Algeria	• Algiers
• Armenia	• Yerevan
• Azerbaijan	• Baku
• Belarus	• Minsk
• Burkina Faso	• Ouagadougou
• Cape Verde	• Praia
• Chad	• N'Djamena
• Egypt	• Cairo
• Gambia, The Republic of	• Banjul
• Georgia	• Tbilisi
• Guinea	• Conakry
• Guinea-Bissau	• Bissau

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• Iran	• Tehran
• Iraq	• Baghdad
• Jordan	• Amman
• Kazakhstan	• Astana
• Kuwait	• Kuwait City
• Lebanon	• Beirut
• Libya	• Tripoli
• Mali	• Bamako
• Mauritania	• Nouakchott
• Moldova	• Chisinau
• Morocco	• Rabat
• Niger	• Niamey
• Nigeria	• Abuja
• Russian Federation	• Moscow
• Senegal	• Dakar
• Syria	• Damascus
• Tunisia	• Tunis
• Turkmenistan	• Ashgabat

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### Band C – more than 3,000 miles from London

Country/Territory	Capital City
• Afghanistan	• Kabul
• Angola	• Luanda
• Anguilla (UK Overseas Territory)	• The Valley
• Antigua and Barbuda	• St John's City
• Argentina	• Buenos Aires
• Ascension (UK Overseas Territory)	• Georgetown
• Australia	• Canberra
• Bahamas	• Nassau
• Bahrain	• Manama

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|--|-----------------------|
| • Bangladesh                                     | • Dhaka               |
| • Barbados                                       | • Bridgetown          |
| • Belize   | • Belmopan            |
| • Benin  | • Porto-Novo          |
| • Bermuda (UK Overseas Territory)                | • Hamilton            |
| • Bhutan   | • Thimphu             |
| • Bolivia  | • La Paz              |
| • Botswana                                       | • Gaborone            |
| • Brazil   | • Brasilia            |
| • British Virgin Islands (UK Overseas Territory) | • Road Town           |
| • Brunei   | • Bandar Seri Begawan |
| • Burma  | • Nay Pyi Daw         |
| • Burundi  | • Bujumbura           |
| • Cambodia                                       | • Phnom Penh          |
| • Cameroon                                       | • Yaounde             |
| • Canada   | • Ottawa              |
| • Cayman Islands (UK Overseas Territory)         | • George Town         |
| • Central African Republic                       | • Bangui              |
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  - Ethiopia
  - Falkland Islands (UK Overseas Territory)
  - Fiji
  - Gabon
  - Ghana
  - Grenada
  - Guatemala
  - Guyana
  - Haiti
  - Honduras
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  - India
  - Indonesia
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  - Kenya
  - Kiribati
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  - Korea, Republic of (South Korea)
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  - Liberia
  - Madagascar
  - Malawi
  - Malaysia
  - Maldives
  - San Salvador
  - Malabo
  - Asmara
  - Addis Ababa
  - Stanley
  - Suva
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  - Maseru
  - Monrovia
  - Antananarivo
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  - Malé
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• Mongolia	• Ulaanbaatar
• Montserrat (UK Overseas Territory)	• Plymouth
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• Nauru	• N/A
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• New Zealand	• Wellington
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• Oman	• Muscat
• Pakistan	• Islamabad
• Palau	• Melekeok
• Panama	• Panama City
• Papua New Guinea	• Port Moresby
• Paraguay	• Asunción
• Peru	• Lima
• Philippines	• Manila
• Pitcairn Henderson Ducie & Oeno Islands (UK OT)	• Adamstown
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• Rwanda	• Kigali
• Saint Christopher and Nevis (St Kitts & Nevis)	• Basseterre
• Saint Helena (UK Overseas Territory)	• Jamestown
• Saint Lucia	• Castries
• Saint Vincent and the Grenadines	• Kingstown
• Samoa	• Apia
• Sao Tome and Principe	• Sao Tome
• Saudi Arabia	• Riyadh

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  - Sierra Leone
  - Singapore
  - Solomon Islands
  - Somalia
  - South Africa
  - South Georgia & South Sandwich Islands (UK OT)
  - Sri Lanka
  - Sudan
  - Suriname
  - Swaziland
  - Taiwan
  - Tajikistan
  - Tanzania
  - Thailand
  - Togo
  - Trinidad and Tobago
  - Tristan da Cunha (Dependency of St Helena)
  - Turks and Caicos Islands (UK Overseas Territory)
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  - Uruguay
  - Uzbekistan
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  - Venezuela
  - Vietnam
  - Yemen
  - Victoria
  - Freetown
  - Singapore
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  - Mogadishu Mogadishu
  - Pretoria/Tshwane
  - King Edward Point
  - Colombo
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