



HM Government

Beyond the horizon

The future of UK aviation

Making best use of existing runways



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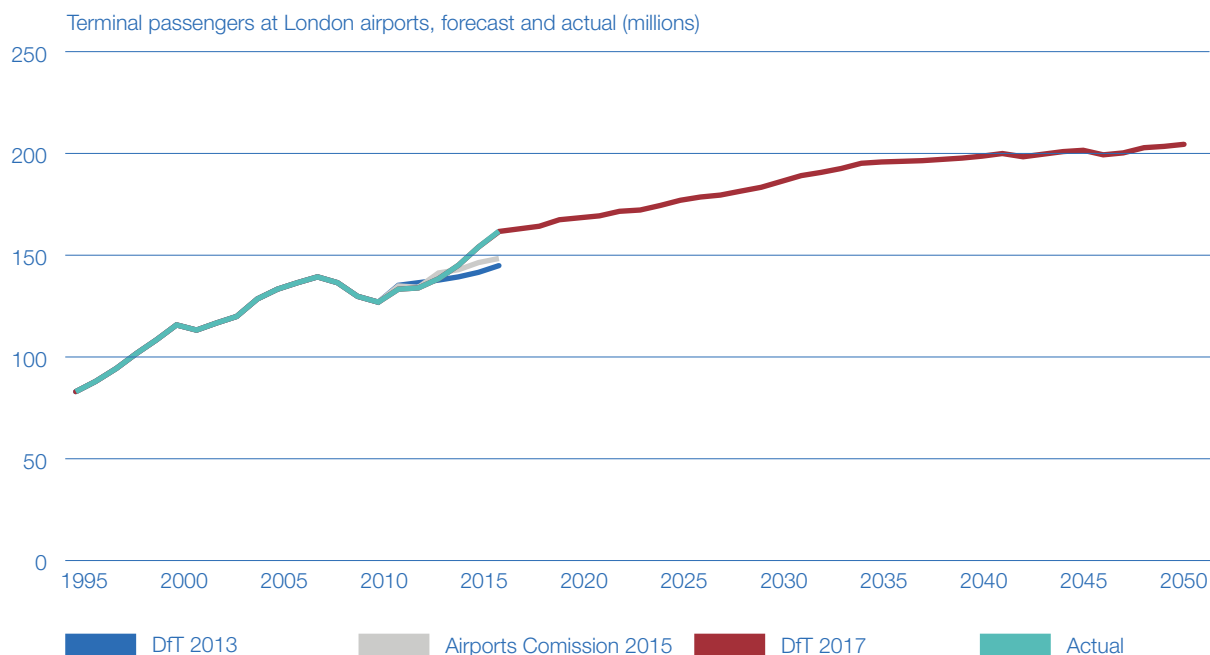
1. Making best use of existing runways

- 1.1 The government's 2013 Aviation Policy Framework provided policy support for airports outside the South East of England to make best use of their existing airport capacity. Airports within the South East were to be considered by the newly established Airports Commission.
- 1.2 The Airports Commission's Final Report recognised the need for an additional runway in the South East by 2030 but also noted that there would be a need for other airports to make more intensive use of their existing infrastructure.
- 1.3 The government has since set out its preferred option for a new Northwest runway at Heathrow by 2030 through drafts of the Airports National Policy Statement (NPS), but has not yet responded on the recommendation for other airports to make more intensive utilisation of their existing infrastructure.
- 1.4 On 24th October 2017 the Department for Transport (DfT) released its latest aviation forecasts. These are the first DfT forecasts since 2013¹. The updated forecasts reflect the accelerated growth experienced in recent years and that demand was 9% higher in London² in 2016 than the Airports Commission forecast³. This has put pressure on existing infrastructure, despite significant financial investments by airports over the past decade, and highlights that government has a clear issue to address.
- 1.5 The Aviation Strategy call for evidence set out that government agrees with the Airports Commission's recommendation and was minded to be supportive of all airports who wish to make best use of their existing runways, including those in the South East, subject to environmental issues being addressed. The position is different for Heathrow, where the government's proposed policy on expansion is set out in the proposed Airports NPS.

1 Additional aviation forecasts were published by the Airports Commission in 2015 to support their recommendations for an additional runway in the south east.

2 Heathrow, Gatwick, Stansted, Luton and London City

3 The difference is explained largely by the fact that oil prices were lower than expected



Call for evidence response summary

- 1.6 The Aviation Strategy call for evidence document asked specifically for views on the government's proposal to support airports throughout the UK making best use of their existing runways, subject to environmental issues being addressed.
- 1.7 We received 346 consultation responses. Excluding those who either did not respond or responded on a different topic, 60% were in favour, 17% against and 23% supportive provided certain issues were addressed.
- 1.8 The main issues raised included the need for environmental issues such as noise, air quality, and carbon to be fully addressed as part of any airport proposal; the need for improved surface access and airspace modernisation to handle the increased road / rail and air traffic; and clarification on the planning process through which airport expansion decisions will be made.

Role of local planning

- 1.9 Most of the concerns raised can be addressed through our existing policies as set out in the 2013 Aviation Policy Framework, or through more recent policy updates such as the new UK Airspace Policy or National Air Quality Plan. For the majority of environmental concerns, the government expects these to be taken into account as part of existing local planning application processes. It is right that decisions on the elements which impact local individuals such as noise and air quality should be considered through the appropriate planning process and CAA airspace change process.
- 1.10 Further, local authorities have a duty to consult before granting any permission, approval, or consent. This ensures that local stakeholders are given appropriate opportunity to input into potential changes which affect their local environment and have their say on airport applications.

Role of national policy

- 1.11 There are, however, some important environmental elements which should be considered at a national level. The government recognises that airports making the best use of their existing runways could lead to increased air traffic which could increase carbon emissions.
- 1.12 We shall be using the Aviation Strategy to progress our wider policy towards tackling aviation carbon. However, to ensure that our policy is compatible with the UK's climate change commitments we have used the DfT aviation model⁴ to look at the impact of allowing all airports to make best use of their existing runway capacity⁵. We have tested this scenario against our published no expansion scenario and the Heathrow Airport North West Runway scheme (LHR NWR) option, under the central demand case.
- 1.13 The forecasts are performed using the DfT UK aviation model which has been extensively quality assured and peer reviewed and is considered fit for purpose and robust for producing forecasts of this nature. Tables 1-3 show the expected figures in passenger numbers, air traffic movements, and carbon at a national level for 2016, 2030, 2040, and 2050.

	Baseline	Baseline + best use	LHR NWR base	LHR NWR + best use
2016	266.6	266.6	266.6	266.6
2030	313.4	314.8	342.5	341.9
2040	359.8	365.9	387.4	388.8
2050	409.5	421.3	435.3	444.2

Table 1: Terminal Passengers at UK airports, million passengers per annum

	Baseline	Baseline + best use	LHR NWR base	LHR NWR + best use
2016	2,119	2,119	2,119	2,119
2030	2,330	2,358	2,459	2,460
2040	2,584	2,602	2,697	2,700
2050	2,901	2,958	3,013	3,043

Table 2: Air Transport Movements (ATMs) at UK airports, 000s

	Baseline	Baseline best use	LHR NWR base	LHR NWR best use
2016	37.3	37.3	37.3	37.3
2030	38.6	38.8	43.5	43.4
2040	38.1	38.7	42.3	42.4
2050	37.0	37.9	39.9	40.8

Table 3: CO₂ from flights departing UK airports, million tonnes

4 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/674749/uk-aviation-forecasts-2017.pdf

5 Modelled the impact of airports increasing their planning cap whenever they have become 95% full.

Implications for the UK's carbon commitments

- 1.14 As explained in Chapter 6 of the Aviation Strategy Next Steps document⁶, we have made significant steps in developing international measures for addressing aviation carbon dioxide (CO₂) emissions, including reaching agreement at the International Civil Aviation Organisation (ICAO) in October 2016 on a global offsetting scheme for international aviation, known as the Carbon Offsetting and Reduction Scheme for International Aviation, or CORSIA. However, there remains uncertainty over future climate change policy and international arrangements to reduce CO₂ and other greenhouse gases. The Airports Commission devised two scenarios which continue to be appropriate to reflect this uncertainty: carbon traded and carbon capped⁷. In this assessment the DfT has followed the same approach.

Carbon traded scenario

- 1.15 Under the carbon-traded scenario, UK aviation emissions could continue to grow provided that compensatory reductions are made elsewhere in the global economy. This could be facilitated by a carbon trading mechanism in which aviation emissions could be traded with other sectors. In this case, provided a global trading scheme is place, higher UK aviation activity would have no impact on global emissions as any increase in emissions would be offset elsewhere and therefore there is nothing to indicate that this policy would prevent the UK meeting its carbon obligations.

Carbon capped scenario

- 1.16 The carbon-capped scenario was developed to explore the case for expansion even in a future where aviation emissions were limited to the Committee on Climate Change's (CCC) planning assumption of 37.5Mt of CO₂ in 2050. Under DfT's carbon-capped scenario the cap is met using a combination of carbon pricing and specific measures. For the central demand case we determined that the most appropriate specific measures to use, based on cost effectiveness and practicality of implementation, were more efficient aircraft ground movements (using single engine taxiing) and higher uptake of renewable fuels⁸.

6 <https://www.gov.uk/government/consultations/a-new-aviation-strategy-for-the-uk-call-for-evidence>

7 For background to the Carbon Policy scenarios used by DfT both in this document and in its airport expansion analysis see pages 9 and 33-38 of:
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/653879/updated-appraisal-report-airport-capacity-in-the-south-east.pdf

8 These would be implemented alongside the carbon price.

- 1.17 The more efficient ground movement policy involves government action to incentivise the use of single-engine taxiing at UK airports. It is assumed that the policy would lead to a 95% take-up rate by 2030 and beyond and it is estimated that this measure would reduce fuel consumption by around 1% per flight on average⁹.
- 1.18 The renewable fuels policy involves government regulations to mandate specific renewable fuel percentages in aviation fuel supply. Any measures deployed would be designed to ensure that the renewable feedstock is sustainable and delivers substantial lifecycle CO₂ savings, such as municipal waste, which on this basis could deliver savings of over 70%. Such a scheme would be consistent with the future aims of the Renewable Transport Fuel Obligation to include aviation and focus on advanced fuels, as set out in the government's response to its recent consultation¹⁰. The levels of carbon reduction delivered by the policy measures are presented in Table 4.

	No expansion base	No expansion + best use	LHR NWR base	LHR NWR + best use
Carbon reduction required, MtCO ₂	-0.5	0.4	2.4	3.3
Abatement from single engine taxiing, MtCO ₂ *	0	0.3	0.3	0.3
Renewable fuel uptake required	0	0**	12%	16%

*Figure does not vary due to rounding
 **Zero due to rounding

Table 4: Policies to meet CCC cap (37.5 MtCO₂), levels in 2050

- 1.19 The level of renewable fuels required is higher under the making best use sensitivity but these are still at the conservative end of the range of forecast future biofuel supply¹¹.
- 1.20 There is significant uncertainty over the likely future cost of these measures and their impact on carbon so this policy mix is presented to illustrate the type of abatement action that could be taken. It should not be interpreted as a statement of future carbon policy which will be considered through the development of the Aviation Strategy. Other measures are likely to be available and may turn out to be more cost effective or have greater abatement potential.
- 1.21 On balance, therefore, it is likely that these or other measures would be available to meet the planning assumption under this policy.

9 Ricardo Energy & Environment, 2017. *Carbon Abatement in UK Aviation* https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/653776/carbon-abatement-in-uk-aviation.pdf

10 DfT, 2017. *Renewable transport fuel obligations order: government response*. <https://www.gov.uk/government/publications/renewable-transport-fuel-obligations-order-government-response>

11 See Increased use of biofuels chapter in Carbon Abatement in UK Aviation Report prepared by Ricardo Energy & Environment for discussion https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/653776/carbon-abatement-in-uk-aviation.pdf

Local environmental impacts

- 1.22 The government recognises the impact on communities living near airports and understands their concerns over local environmental issues, particularly noise, air quality and surface access. As airports look to make the best use of their existing runways, it is important that communities surrounding those airports share in the economic benefits of this, and that adverse impacts such as noise are mitigated where possible.
- 1.23 For the majority of local environmental concerns, the government expects these to be taken into account as part of existing local planning application processes.
- 1.24 As part of their planning applications airports will need to demonstrate how they will mitigate local environmental issues, which can then be presented to, and considered by, communities as part of the planning consultation process. This ensures that local stakeholders are given appropriate opportunity to input into potential changes which affect their environment and have their say on airport applications.

Policy statement

- 1.25 As a result of the consultation and further analysis to ensure future carbon emissions can be managed, government believes there is a case for airports making best of their existing runways across the whole of the UK. The position is different for Heathrow Airport where the government's policy on increasing capacity is set out in the proposed Airports NPS.
- 1.26 Airports that wish to increase either the passenger or air traffic movement caps to allow them to make best use of their existing runways will need to submit applications to the relevant planning authority. We expect that applications to increase existing planning caps by fewer than 10 million passengers per annum (mppa) can be taken forward through local planning authorities under the Town and Country Planning Act 1990. As part of any planning application airports will need to demonstrate how they will mitigate against local environmental issues, taking account of relevant national policies, including any new environmental policies emerging from the Aviation Strategy. This policy statement does not prejudge the decision of those authorities who will be required to give proper consideration to such applications. It instead leaves it up to local, rather than national government, to consider each case on its merits.
- 1.27 Applications to increase caps by 10mppa or more or deemed nationally significant would be considered as Nationally Significant Infrastructure Projects (NSIPs) under the Planning Act 2008 and as such would be considered on a case by case basis by the Secretary of State.

- 1.28 Given the likely increase in ATMs that could be achieved through making best use of existing runways is relatively small (2% increase in ATMs “without Heathrow expansion” scenario; 1% “with Heathrow”), we do not expect that the policy will have significant implications for our overall airspace capacity. However it is important to note that any flightpath changes required as a result of a development at an airport will need to follow the CAA’s airspace change process. This includes full assessment of the likely environmental impacts, consideration of options to mitigate these impacts, and the need to consult with stakeholders who may be affected. Approval for the proposed airspace change will only be granted once the CAA has been satisfied that all aspects, including safety, have been addressed. In addition, government has committed to establish an Independent Commission on Civil Aviation Noise (ICCAN) to help ensure that the noise impacts of airspace changes are properly considered and give communities a greater stake in noise management.
- 1.29 **Therefore the government is supportive of airports beyond Heathrow making best use of their existing runways. However, we recognise that the development of airports can have negative as well as positive local impacts, including on noise levels. We therefore consider that any proposals should be judged by the relevant planning authority, taking careful account of all relevant considerations, particularly economic and environmental impacts and proposed mitigations. This policy statement does not prejudge the decision of those authorities who will be required to give proper consideration to such applications. It instead leaves it up to local, rather than national government, to consider each case on its merits.**

