Effect Of A New Heathrow Runway On Air Traffic Demand

Friends of the Earth West London

Introduction

There has been a huge lobbying campaign by Heathrow Airport, supported by the Department for Transport (DfT), to convince politicians, opinion formers and the public alike, that regions will benefit economically from Heathrow expansion. The argument being that more air travel brings more trade. It remains unproven that having more and more air travel generates more trade, not least because the great majority of air travel is leisure, not business. However, this paper just examines the changes to numbers of passengers resulting from Heathrow expansion. It shows a big reduction in traffic growth at regional airports.

Traffic demand data

The Airports Commission (AC) carried out a detailed analysis of demand and this was updated by the Department for Transport in October 2017 – 'UK aviation forecasts'. [1] The demand was forecast in the case of a new (third) runway at Heathrow, termed 'Heathrow Northwest Runway' or NWR for short. The demand was also forecast for a 'Do Minimum' or 'Baseline' case. This assumes no new runway at Heathrow but, crucially, no new runways anywhere else. The Baseline traffic can be compared with the NWR traffic all across the country to show the effects of the new runway.

Results

As might be expected, the demand for the UK is a bit larger with NWR than Baseline. However, the majority of the increase is due to 'International-to-International Transfers'. These are foreign travellers changing planes in the UK, mainly at Heathrow. Because the passengers do not stay in the UK, they can bring no appreciable economic benefit. They even avoid tax (no Air Passenger Duty, no tax on aircraft fuel, duty-free goods, etc.)

The reason why there is a modest effect of a new runway at Heathrow is that there is ample spare capacity at all UK airports except Heathrow and Gatwick. If the latter two are not expanded, terminating demand will be simply be met at other airports.

There are large increases in traffic at Heathrow with NWR. But these cause a reduction of traffic at regional airports (as compared with no new runway). The traffic at 2030 is 4.3% less in 2030 with NWR and 8.5% at 2050. See appendix for figures quoted and references.

In terms of growth, the figures are even more revealing. Growth to 2030 is down 24% and growth to 2050 is down 17% - see Appendix 1.

Many airports will suffer greatly reduced growth a result of Heathrow NWR - see Appendix 2.

None of these forecasts take proper account of the UK target for carbon emissions. [2]

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[1] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/674749/uk-aviation-forecasts-2017.pdf

[2] The government refuses to accept unequivocally that aviation emissions should be included in the UK's target of CO2 emissions. In parallel with this it also claims that aviation's CO2 emissions will be 'offset' by some international system of carbon trading. This is a wild and unjustified assumption. See separate briefings on this issue.

Conclusions

A third runway would increase slightly the total UK traffic, but would greatly reduce growth of traffic at regional airports (even ignoring any constraints due to limits on carbon emissions). It is hard to see how this could be good for regional economies.

A new runway will increase the concentration of aviation-related and aviation-dependent industries in the south east and away from other parts of the UK. It will also mean that government expenditure on surface access, estimated variously at £1-14 billion, will be spent in the SE and therefore not be available for the rest of the UK.

Appendix 1 – Traffic Demand at 2030 and 2050

The tables below show the effects - as forecast by the Department for Transport (DfT) – of a third runway at Heathrow. Results are given for the UK as whole and for the "regions", that is all UK airports except the London airports.

Data for these tables is taken directly from the DfT 'UK aviation forecasts' of October 2017' [3] References are given to the table (T) and page number (p) of the report. These numbers are provided in more detail (unrounded) in a DfT spreadsheet. [4] Table numbers are the same but page numbers not.

'Baseline' is the DfT scenario (also known as 'Do Minimum') where there is no new runway in the SE or anywhere else in the country. 'NWR' is where a new Heathrow northwest runway is built but there is no new runway anywhere else.

DfT used a number of forecast scenarios with more or less 'optimistic' growth projections. However, the one on which it based its conclusions and reported mainly upon is the 'central' scenario.

Tables 1 and 2 below show the results, taken directly from the DfT forecasts or calculated straightforwardly from the data. Figures are millions of passengers per annum at UK airports (mppa). The effect is calculated as an absolute or percentage increase/decrease in traffic with NWR as compared with Baseline.

For non-London airports the traffic excluding international-to-international transfers is not shown because the transfers are negligible.

Table 1. UK traffic

Year	Total traffic			Traffic excluding International-to-International transfers		
	Baseline	With NWR	Effect	Baseline	With R3	% effect
2030	313.4	342.5	+29.3, +9.3%	294.6 (313.4 – 18.7)	303.5 (342.5 -37)	+ 3.0%
2050	409.5	435.3	+ 25.8, +6.3%	404.6 (409.5 – 4.9)	414.4 (435.4 - 21)	+ 2.4%
Source	T63 (p137)	T65 (p141)	Calculated	Calculated	Calc but see note [5]	Calculated

[3] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/674749/uk-aviation-forecasts-2017.pdf

[4] File 'UK aviation forecasts 2017 data, MS Excel Spreadsheet, 227KB' at https://www.gov.uk/government/publications/uk-aviation-forecasts-2017

[5] The Airport Commission (AC) forecasts showed the numbers of International-to-International passengers for both Baseline and NWR. The DfT forecasts show the numbers for Baseline but, for reasons unknown, not for NWR. The latter can in principle be calculated from a more detailed spreadsheet 'UK aviation forecasts 2017 disaggregated data, ZIP, 10.6MB' at https://www.gov.uk/government/publications/uk-aviation-forecasts-2017. This list thousands of routes which could be filtered and summed. WLFOE has not done this, but the Richmond Heathrow Campaign (RHC) and the New Economics Foundation (NEF) have derived the numbers of 37 and 21 mppa respectively for 2030 and 2050. The AC forecast figures of 36 and 23mppa as part of their overall forecasts in 2015 which are very similar the overall DfT forecasts of 2017. There is no reason to suppose, therefore, that the RHC and NEF figures are not reliable. It should also be noted that RHC and NEF have submitted their figures to DfT and the latter have not disagreed.

Table 2. Traffic at non-London airports

Year	Traffic			Growth in traffic (from 2016)		
	Baseline	With NWR	Effect	Baseline	With R3	% effect
2016	104.2	104.2				
2030	126.3	120.9	- 5.4, - 4.3%	22.1 (126.3-104.2)	16.7 (120.9-104.2)	- 24.4%
2050	204.2	186.8	- 17.3, - 8.5%	100.0 (204.2-104.2)	82.6 (186.8-104.2)	- 17.4%
Source	T63 (p137)	T65 (p141)	Calculated	Calculated	Calculated	Calculated

Appendix 2 – Traffic demand at major airports

The DfT forecasts are broken down by airport. These are shown in Tables 63 and 65 of the DfT pdf file and of the spreadsheet referenced in App 1. The table below uses this data to calculate the effect of NWR on the main UK airports.

Table 3. Effect of NWR on major airports.

Airport	Increase/decrease in total traffic due to NWR: mppa and %		Increase/decrease in growth from 2016 due to NWR	
	2030	2050	2030	2050
Gatwick	-0.7, -1.6%	-0.1, -0.2%	-37.5%	-1.1%
Heathrow	+46.2, +53.5%	+43.0, +46.1%	+449.6%	+246.3%
London City	-2.0, -31.5%	+0.2, +3.1%	-83.1%	+8.6%
Luton	-0.2, -0.8%	-0.1, -0.4%	-4.3%	-2.1%
Stansted	-8.7, -28.1%	0.0, 0.0%	-135.3%	0.0%
Birmingham	-2.8, -15.4%	-1.8, -5.4%	-47.3%	-8.6%
Bristol	-1.0, -10.3%	-0.2, -1.9%	-51.3%	-7.4%
East Midlands	+0.3, +4.6%	-0.1, -1.1%	+18.6%	-2.1%
Edinburgh	+0.3, +2.8%	+1.4, +7.7%	+50.1%	+23.3%
Glasgow	-0.6, -4.7%	-1.2, -8.0%	-14.2%	17.2%
Liverpool	+0.4, +8.6%	-0.1, -1.1%	- - -	- - -
Manchester	-1.5, -4.7%	-5.1, -10.2%	-36.9%	-21.9%
Newcastle	+0.4, +7.8%	-0.3, -4.3%	- - -	- - -

Example of calculation - Birmingham airport.

Baseline traffic: 2016 – 12.27 mppa (Table 63), 2030 – 18.21 (Table 63).
With HNW: 2016 – 12.27 (Table 65), 2030 – 15.40 (Table 65).
Effect on traffic at 2030 with HNW: 15.40 – 18.21 = - 2.81, as % 100 x -2.81 / 18.21 = - 15.4%
Effect on growth from 2016 to 2030: Baseline growth 18.21 – 12.27 = 5.94, NWR growth 15.40 – 12.27 = 3.13, Effect of NWR 100 x (3.13 – 5.94)/5.95 = - 47.2%

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