



ADDING CAPACITY AT HEATHROW AIRPORT RESPONSE TO THE DFT CONSULTATION

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Response to the DfT consultation

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Summary

There is a risk that even with a third runway, the current pattern of services will remain unchanged (at a higher volume of passengers). Thus the quote "*Heathrow is our main gateway to the global economy – supports billions of pounds of British exports and thousands of UK jobs, and encourages hundreds of international businesses to locate in the UK*" will remain valid only from a London perspective. There are no direct benefits to the UK regions from a third runway at Heathrow and there may be losses resulting from UK regional airports linking to other European hubs (e.g. Amsterdam) and not to Heathrow.

The surface accessibility of Heathrow is treated as an ancillary issue in the UK air transport policy, with this important issue only being considered after decisions on air-side infrastructure and terminals have been made. This undermines the policy objective of the government with respect to developing Heathrow especially with regard to securing its economic contribution to the whole of the UK.

Decisions on a third runway at Heathrow cannot be separated from decisions on providing sufficient high quality public transport access, especially by rail, from all parts of the UK, not just London. This requires substantial investments from the public and private sectors to ensure reliable public transport travel times. It is as important as providing additional runway capacity to secure the potential economic benefits of Heathrow.

A study on air-rail integration found that in 2003 on 10 short haul routes served from Heathrow, High-Speed Train services could offer a better option for passengers. To serve these routes, airlines used 20% of Heathrow capacity, including over 4% of the runway capacity just to serve Paris CDG (at a time when Eurostar already had close to 70% of the market on that route). In addition, placing Heathrow airport directly on the main rail network in the UK would allow major UK cities access to its services, for example Birmingham and Bristol.

We therefore call the Government to give a real consideration - through a consultation process - for increasing Heathrow accessibility capacity through substantial investments in additional rail infrastructure and making it an important node on the UK rail network. The Government support for an integrated transport policy must be demonstrated in the development of Heathrow airport.

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“The aviation sector makes an important contribution to the UK economy, bringing significant benefits in terms of employment and business investment. International connectivity – and Heathrow is our main gateway to the global economy – supports billions of pounds of British exports and thousands of UK jobs, and encourages hundreds of international businesses to locate in the UK... But Heathrow’s runways are now full and its route network is shrinking. Since 1990 the number of destinations served by Heathrow has fallen by over 20 per cent. Capacity constraints will lead to fewer routes, increasingly congested conditions and more delays at the airport and fewer connecting services to the UK regions. (Consultation document, p. 18).

1. The above provides a clear picture of the importance of Heathrow airport and some of its current limitations. It is the basis for the consultation on adding capacity at Heathrow airport and the starting point to our contribution to it.

The economic benefits of Heathrow airport

2. It is recognised that even with the third runway (and mixed mode operation on the existing runways) capacity at Heathrow will barely meet demand in 2030.. Therefore, issues concerning the airport contribution to the UK economy, its international position, level of congestion and accessibility from the UK regions will not be solved by a third runway and capacity is likely to remain a problem for in the future.
3. The lack of runway capacity force Heathrow to adopt the Hourglass model of Hub&Spoke operation. This means focusing on the long-haul market (more profitable to airlines) at the expense of the short haul market, and in particular the domestic short haul market, as the figures given below show. Other than the higher profitability of the long-haul market, the competition with other European hub airports on the transfer market also contributes to this situation.
4. The result is that the UK regions are losing access to Heathrow and its global network of air services (in 1990, 18 destinations were served from Heathrow by 118 round trips per day, and these figures fell to only eight destinations and 84 round trips per day in 2004ⁱ). At the same time, cities like Paris and Amsterdam are keeping their high level of service to Heathrow. Data for 2003 shows that there were 27 and 23 daily (one way) flights from Heathrow to Paris and Amsterdam respectively.
5. Two main forces will preserve the pattern of traffic at Heathrow even with a third runway. First, the continued “opening the skies” is likely to increase the competition between (European) hub airports. In particular, the recent EU-US open sky agreement will draw more airlines to the lucrative trans-Atlantic routes between Heathrow and the US taking up significant (new) capacityⁱⁱ. Second, the expected economic growth of London, which will increase demand from London for Heathrow services. Thus, the UK regions will not necessarily benefit from an increased runway capacity at Heathrow.

6. There is no empirical evidence to show that provision of additional runway (and runway capacity) at major airports reduce congestion and delays as any additional capacity will be used and often to increase service frequency on existing routesⁱⁱⁱ. This is demonstrated by the absence of services to many UK airports while Paris is served with almost 30 daily flights.
7. Both the DfT and BAA forecasts for the number of passengers and air traffic movements (atm) under different expansion scenarios shows a sharp increase in the number of passengers per atm (i.e. increase in aircraft size). Every increase in capacity is accompanied by an increase in aircraft size, from the current (2006) 142 passengers per atm to 192 in 2030 (highest capacity scenario). This indicates that any new capacity will be used mainly for long haul flights where the large aircraft are utilised. Boeing forecast that despite increase in demand over the next 20 years aircraft size will not change much^{iv}. Currently, at Atlanta (4 runways) and Chicago O'Hare (7 runways), the largest airports in the world, there only 87 and 75 passengers per atm respectively. The figures for Paris CDG and Amsterdam Schiphol are 93 and 102 passengers per atm respectively^v.
8. Currently, most of Heathrow's passengers come from the South East of England and mainly Greater London, and this is likely to remain in the future. This situation is facilitated not only by the lack of air services to Heathrow from the UK regions but also by the poor surface accessibility of the airport due to the lack of (long-distance) railway services and the congestion on the roads around the airport. The alternative for many UK regions, in this case, is to use other European hub airports as gateways to the world, when demand is too low to support direct flights. Amsterdam airport provides direct services to 21 UK airports! Almost 50% of passengers flying from Birmingham to Amsterdam transfer there to another flight (most likely a KLM flight)^{vi}.
9. In this situation, the potential economic benefits from air transport are shared with other European airlines, airports and countries.
10. The number of scheduled international destinations served by Heathrow has fallen from 227 in 1990 to 180 in 2006. There is therefore a possibility that the capacity provided by the third runway will not change substantially the number of destinations served by Heathrow due to the competitive pressure which shapes current network of air services from Heathrow.
11. **There is a risk that even with a third runway, the current pattern of services will remain unchanged (at a higher volume of passengers). Thus the quote "Heathrow is our main gateway to the global economy – supports billions of pounds of British exports and thousands of UK jobs, and encourages hundreds of international businesses to locate in the UK" will remain valid only from a London perspective. There are no direct benefits to the UK regions from a third runway at Heathrow and there may be losses resulting from UK regional airports linking to other European hubs (e.g. Amsterdam) and not to Heathrow^{vii}.**

Accessibility of Heathrow airport

12. The Heathrow catchment area is very much limited to Greater London, even though it is the main UK airport. This is very much due to its poor surface transport accessibility from areas outside Greater London. Specifically, the fact that the airport is not a node on the UK long-distance rail network.

13. Although the airport is relatively well connected to the motorway network, 50% of passengers (22.4m in 2006) who arrive to the airport by car come from Greater London.
14. Overall, Heathrow airport has a relatively good share of public transport use on access journeys to the airport (36.2% in 2004) and the majority of these journeys are by rail (over 20% of total access journeys). However, these journeys are mainly from London, including most of the rail journeys, through the underground network or Heathrow Expresses/Connect services. Other rail access services to Heathrow require a bus transit from one of the nearby railway stations and are therefore not attractive. From outside London most of the access journeys by public transport are by coach services which are subject to the congestion on the roads around Heathrow and poor reliability.
15. The UK air transport policy often refers to Amsterdam Schiphol airport, in particular to the fact that, as one of Heathrow's main competitors, it has 5 runways (but even with 5 runways Schiphol capacity is much smaller than Heathrow capacity). Amsterdam is better used as an example in terms of its rail connectivity.
16. Historically, two railway lines were built from Amsterdam to the South and these passed relatively far from the location of the airport. In the 1990s, a third line was constructed to connect the airport to the rail network. The airport railway station was built directly under the terminals. In 2003, 54 of the 350 railway stations on the Dutch network had direct rail service to the airport and from over 95% of the stations on the network the airport could be accessed with 2 transfers. At the same time, the airport station was ranked 5th in the Dutch network in terms of rail connectivity, before Amsterdam's central station (ranked 8th). In 2006, a new rail connection was opened^{viii} which allow direct railway services from Schiphol to cities like Utrecht (Utrecht Central station was ranked first in terms of connectivity), Eindhoven (as a result KLM stopped its flight to Schiphol from this city and instead it uses the rail), and it allows the German ICE trains from Germany to serve the airport (benefiting the airport in the competition with Frankfurt airport). In 2008, the HST line from Amsterdam to Belgium is expected to open and this line terminates at Schiphol (trains will continue to Amsterdam on the conventional line).
17. In 2003, the density of the UK rail network was 70m/km², higher than that of the Netherlands at 68^{ix}. The density of the rail network in the South East of England is higher than the UK average and thus the situation at Heathrow cannot be attributed to rail network around it but to its connection to it.
18. In 2015 Heathrow airport might handle 67.2 million non-transfer passengers (mixed mode operation) and this can increase to 91.5 millions in 2030 (with a third runway). Currently there are no plans to introduce long-distance railway services at Heathrow. Thus, the increase in public transport share of the access journeys 39.6% and 41.7% in 2015 and 2030 respectively, means increased public transport use on journeys from London.
19. Current rail plans for Heathrow include the AirTrack project (which will only serve regional services and only to Terminal 5), the Crossrail project (the consultation document states: "Crossrail includes services to Heathrow, allowing direct services from terminals 1-4 to Paddington" p. 104 – Terminal 5 is not included!) and improvements to the underground and Heathrow express services. The consultation does not elaborate on how these services will be connected to the proposed new terminal which will be built if a third runway is approved. It is very

likely that, as today and with Terminal 5, there will be no direct rail service connecting all of Heathrow terminals.

20. The main UK airport, which already handles over 40 million non-transfer passengers, will continue to rely on coach services for public transport access from outside London.
21. **The surface accessibility of Heathrow is treated as an ancillary issue in the UK air transport policy, with this important issue only being considered after decisions on air-side infrastructure and terminals have been made. This undermines the policy objective of the government with respect to developing Heathrow especially with regard to securing its economic contribution to the whole of the UK.**

Heathrow airport as a city

22. The size and importance of Heathrow airport to the UK means that its development cannot be done in isolation from the development of the rest of the transport network. But this is the current situation!
23. The consultation document considers a situation where Heathrow airport will have a capacity of up to 122 million passengers (91.5 million non-transfer passengers and in addition 60,400 employees – there are no details on the number of trips generated to the airport under different scenarios) it states that “it would be for the airport operator, as part of a comprehensive transport assessment, to develop a surface access strategy” (p. 102).
24. At present, with over 40 million non-transfer passengers and over 63500 employees, the airport is dealing with access strategies through the Heathrow Area Transport Forum a partnerships of private and public sector bodies (mainly the airport operator, its users and local authorities surrounding the airport) to improve accessibility and tackle car dependency to and around Heathrow. Such a bottom-up approach can only deal with local issues concerning access to Heathrow, and mainly access by employees, but it cannot suggest or progress any strategic decisions on access infrastructure.
25. In the Dutch planning system, Schiphol airport is very much considered as a city and is often referred to as an “AirportCity”. Schiphol has no unique location attributes which makes it the fifth most important station on the Dutch rail network, rather it is its function as an international gateway and its size (in terms of potential rail travellers) which makes the airport, in terms of railway services, one of the largest cities in the Netherlands. The potential demand for rail services at Heathrow is likely to make it the biggest railway station in the UK if appropriate infrastructure was provided.
26. The main conclusion of the Eddington report in terms of transport infrastructure was that in economic and social terms investments in improving access to the main UK international gateways will have the highest welfare return on investments, mainly since access to these gateways is currently congested. This important conclusion is ignored in the case of developing Heathrow airport.
27. The differences between rail accessibility to Heathrow and Schiphol can be related to privatisation. In the UK the airlines, airport and rail companies are privatised while in the the Netherlands the state still owns (most of) the railway, the airport and until recently had some control of the airline. However, the case of Paris CDG airport demonstrates that privatisation and competitive pressure on the air and rail industries can facilitate the connection of a main airport to the rail network^x.

28. In addition to the effect of privatisation (which can be positive or negative) the institutional settings play an important role, as these can provide the forum in which such infrastructure projects are discussed and coordinated between different stakeholders. The Eddington report recognised this. “Government needs to ensure the delivery system is ready to meet future challenges, including through reform of sub-national governance arrangements and reforming the planning process for major transport projects by introducing a new Independent Planning Commission to take decisions on projects of strategic importance” (page 7 of the Eddington report).
29. It is not clear which body represents the rail industry and the rail sector in the consultation on adding capacity at Heathrow airport.
30. **Decisions on a third runway at Heathrow cannot be separated from decisions on providing sufficient high quality public transport access, especially by rail, from all parts of the UK, not just London. This requires substantial investments from the public and private sectors to ensure reliable public transport travel times. It is as important as providing additional runway capacity to secure the potential economic benefits of Heathrow.**
31. **A study on air-rail integration^{xi} found that in 2003 on 10 short haul routes served from Heathrow, High-Speed Train services could offer a better option for passengers. To serve these routes, airlines used 20% of Heathrow capacity, including over 4% of the runway capacity just to serve Paris CDG (at a time when Eurostar already had close to 70% of the market on that route). In addition, placing Heathrow airport directly on the main rail network in the UK would allow major UK cities access to its services, for example Birmingham and Bristol.**

Conclusions: there are alternatives to a third runway to increase capacity at Heathrow.

32. Building another runway at Heathrow does not guarantee the potential economic benefits of air transport. It certainly does not guarantee that such benefits, if occurred, will be shared across the UK.
33. Making Heathrow a station on the UK rail network – similar to the position of Schiphol airport on the Dutch rail network – can provide similar and additional benefits and, as important, will ensure that these benefits are enjoyed also outside London.
34. In addition, adding capacity through the rail network will provide environmental benefits, not only from aircraft-rail substitution but also from car-rail substitution. Thus such a strategy will meet both the economic and environmental objectives for development of Heathrow.
35. The Government is correct to recognise the importance of Heathrow airport to the UK and in recognising that its current position, domestically and internationally, undermines air transport contribution to the UK. But in developing Heathrow a broader view of “capacity” is required and a recognition that Heathrow is not just an airport but a strategic node on the UK transport network.
36. In developing Heathrow, and whether a third runway is constructed or not, accessibility of the airport and its connection to the UK surface transport network should lead the planning, not be considered later. This equally applies to developments already underway at Heathrow, e.g. the development of Heathrow East.
37. **We therefore call the Government to give a real consideration - through a consultation process - for increasing Heathrow accessibility capacity through**

substantial investments in additional rail infrastructure and making it an important node on the UK rail network. The Government support for an integrated transport policy must be demonstrated in the development of Heathrow airport.

ⁱ CAA, Civil Aviation Authority, 2005. CAP 754 UK regional air services. CAA Economic Regulation Group, February.

ⁱⁱ Another example is the recently signed EU-Israel open-sky agreement. This led another player (bmi) to enter the London-Tel-Aviv market. Even before this agreement, in 2003, Tel-Aviv benefited from 4-daily services to Heathrow, similar to the level of service from cities such as Leeds and Newcastle.

ⁱⁱⁱ Givoni, M. and Rietveld, P. (2006) Airlines' choice of aircraft size - implications and explanations. Tinbergen Institute Discussion Paper, TI 2006-113/3.

^{iv} Boeing (2005): *Current market outlook*, Boeing Commercial Airplanes, July.

^v Assuming a load factor of 80%, an aircraft operating at Heathrow in 2030 will have on average 240 seats, the lower end of the wide-body aircraft.

^{vi} CAA, Civil Aviation Authority, 2005. CAP 754 UK regional air services. CAA Economic Regulation Group, February.

^{vii} This is currently being researched at the Transport Studies Unit, Oxford University.

^{viii} In terms of infrastructure, this required a bridge to connect two lines which were previously crossing each other, requiring a change of trains to get to the airport from, for example, Utrecht.

^{ix} EC, European Commission, 2005. European Union energy and transport in Figs. 2005. European Commission, Directorate-General for Energy and Transport.

^x For full details see: Givoni, M. and Rietveld, P. (2008) Rail Infrastructure at major European Hub Airports - the Role of Institutional Settings. In, H. Priemus, B. van Wee and B. Flyvbjerg (eds.) *Decision-Making on Mega-Projects: Cost-benefit Analysis*, Planning and Innovation, Edward Elgar, pp. 281-303.

^{xi} See Givoni, M. and Banister, D. (2006) Airline and railway integration. *Transport Policy*, 13: 386-397. And Givoni, M. and Banister, D. (2007) The role of the railways in the future of air transport. *Transport Planning and Technology*, 30(1): 95-112.