Transport for London

Airports Commission Discussion Paper 06

Regional Connectivity and Existing Airport Capacity

The Mayor of London's response

July 2014

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1. Overview

1.1. In June 2014, the Airports Commission issued a Discussion Paper on Utilisation of the UK's Existing Airport Capacity (DP06), including a strong focus on the question of regional connectivity. This response addresses the issues raised; it has been written in light of key research commissioned by TfL. This study has been prepared in conjunction with a series of events where the Mayor's team has travelled to the regions, and listened to the views of businesses, Government officials, and the airports. These events are described in Appendix B. The overwhelming response has been an acknowledgement that hub airport connections are especially important to the regions and that having regional routes forced out of Heathrow is harming their economies.

1.2. The Mayor has long recognised that the debate about hub airport capacity is not just about finding the optimum solution for London but for the whole of the UK too.

1.3. It is within this context, that this paper has sought to respond to the issues raised. This response is structured under a series of key points that are germane to the Commission's on-going work. A cross reference to the Commission's specific questions is set out in Appendix A.

Summary of key points

1.4. Strong connectivity for UK regional airports is a key objective for the regions – it is vital to local business and to the health of their region's economy. Each regional airport places its city and region on the international map and serves as the gateway to its hinterland, promoting trade, investment and inbound tourism. This has an important role in developing the national economy and addressing regional imbalances.

1.5. All the regional airports depend, to differing degrees, on connections to a hub airport to provide full connectivity to their passengers. The size of the London and southeast origin/destination (O/D) market means that for most regional airports the access to the UK hub would be central to their connectivity, enabling them to reach the widest range of frequencies and routes across the globe; the majority of these routes could not be viably served direct from regional airports. At the same time, such a link to the

UK hub ensures direct access to the UK's capital and largest economic centre.

1.6. The UK regional airports broadly fall into two categories:

- Major airports (e.g. Manchester, Glasgow) which can support a moderate network of international flights including some longhaul routes – though these are focused on serving foreign hubs, VFR (visiting friends and relatives) and outbound leisure routes; these airports rely on access to the UK hub for fast connections to many destinations worldwide they cannot serve, notably in emerging markets.

- Smaller airports (e.g. Durham Tees Valley, Newquay) which can support few if any international routes; these airports are heavily dependent on access to the UK hub, both for access to global markets, but also for maintaining passenger volumes and so support the viability of their airport business.

1.7. Yet, Heathrow, as the UK's existing hub, is failing the rest of the UK. Its slot constraints force airlines to make trade-offs, with domestic routes and frequencies edged out in favour of other services. That has resulted in a continual reduction in domestic flights to Heathrow, with 11 domestic routes lost since 1990. In its Interim Report, the Airports Commission recognised that the weakening of links to Heathrow has "contributed to a continuing decline in (regional) connectivity". And Heathrow's recent revised scheme design submissions to the Commission were also clear that capacity constraints are the cause of its loss of regional routes.

1.8. Nor is a third runway the answer – the Airports Commission identified that "the expanded airport would be operating at around 80-90% capacity by 2030" – i.e. effectively full, with no slot availability at peak times. Domestic flights would continue to be squeezed out, and there is no 'quick fix'.

1.9. Only a 4-runway hub airport would offer the capacity to enable airlines to offer new domestic routes and frequencies from the hub. Work undertaken by York Aviation and Oxford Economics identified that a new hub would allow up to 63 additional domestic daily flights, including 8 new destinations: Cardiff, Dundee, Durham Tees Valley, Humberside, Inverness, Liverpool, Newquay and Plymouth.

1.10. Moreover, the study estimates that this connectivity would provide a £2.2bn economic boost to 15 major UK cities and deliver 18,000 jobs.

1.11. The regions will continue to develop routes to foreign hubs – but without the strong O/D traffic of their routes to London, these will typically be viable at a lower frequency if at all: for many regional airports, a route to an (unconstrained) London hub is the only feasible option.

1.12. Nor is Gatwick a credible alternative – it is not a hub and as such cannot offer the regions the connectivity they need. At the same time, the lower level of connecting traffic limits the frequency of a route to Gatwick – if not wholly undermining the route's viability.

1.13. The mechanisms for supporting UK regional airports in general and their services to the UK hub in particular are very limited in their scope. Moreover, attempts to influence the trade-offs being made, in favour of domestic routes, will not meet the UK connectivity need – only a unconstrained hub, with sufficient capacity, can achieve this, by largely avoiding the need for trade offs altogether.

1.14. With regard to the London Airports System, Gatwick, Stansted, Luton, City and Southend will continue to play a useful supplementary role, providing additional services, particularly for European leisure shorthaul routes; some surface access improvements have been identified, but other interventions are not required; in particular a lifting of planning caps in not warranted. Fundamentally, these London airports cannot substantially alleviate the severe hub capacity constraints (at Heathrow).

2. Why connectivity is key for the UK regions

Good regional connectivity is key – underpinned by access to a London hub

2.1. At the outset, it should be stressed that good connectivity is essential to ensure that the UK's regions can thrive economically and contribute to the overall health of the UK economy. This requires good air transport links to support business and a wide range of connections to attract inbound visitors. Whilst UK citizens seeking to travel from the regions are unlikely to be deterred by lack of connectivity, the same cannot be true of inbound visitors, whether travelling for business or leisure purposes, who will choose where to visit or do business based on ease of access to a large extent. Furthermore, domestic business location decisions may be influenced by regional connectivity and this is important to consider in the Government's stated aim of rebalancing the economy away from London.

2.2. Central to good connectivity for the regions are direct flights to the London hub. These could provide access to the wider range of routes and frequencies that the hub can support – including longhaul destinations in emerging markets that are playing an increasingly important role in the global economy.

2.3. However, the hub can only offer this regional connectivity if it has the extra capacity to support new routes and frequencies. We welcome Heathrow's recognition of its inadequacies - that its "challenge is to make sure that Heathrow can regain the air links to regions and nations that were lost as capacity constraints squeezed out domestic traffic[1]." However, Heathrow's solution is wholly inadequate; the Airport Commission's own forecasts indicate the airport would effectively be full again shortly after a third runway opened. Only a new 4-runway hub can offer the capacity to support better regional connectivity.

2.4. Nor is access to another London airport, such as Gatwick, a substitute; Gatwick is not a hub and so cannot offer the wide range of routes and frequencies, for example to emerging markets. Even Gatwick Airport "accepts there may be some destinations, for example Chinese cities, that Gatwick would be unable to support even with a second runway[2]." This not only reduces the attractiveness of flying via Gatwick, but the lack of connecting traffic in turn undermines the viability of the route from the regional airport.

2.5. By contrast, the flights to the London hub are underpinned by the both the transfer traffic and strong origin/destination (O/D) traffic to London; each supports the other, ensuring better load factors and yields for the airlines; this safeguards the route and enables higher frequencies, increasing the attractiveness of the region as a place to visit and do business.

2.6. The importance of London as a destination in its own right should not be overlooked. After all, London is one of only two Alpha ++ cities in the Global and World Cities Index[3]. Regions benefit from good connectivity to one of the world's major economic centres.

2.7. The development of direct international connections from the regions is welcome and this will likely continue as demand for air travel increases. Nonetheless, there are limitations on the range of such services that can viably be operated. As demonstrated in the Mayor's response to Discussion Paper 04[4], the longhaul routes from the major UK regional airports have been almost exclusively focused on outbound leisure, VFR (visiting friends and relatives) and feeder connections into foreign hubs. Meanwhile many of the smaller UK regional airports will be able to support few, if any, international routes.

2.8. Where there are routes from regional airports to foreign hubs, the lower O/D traffic makes it more difficult to sustain the same level of frequency that can be offered to an (unconstrained) London hub. This is why, notwithstanding the existence of other direct international routes, access to a London hub remains of particular importance for UK regional airports and their global connectivity.

2.9. The economic benefits of regional connectivity are also explored in more detail in the recent paper "Making Connections" by York Aviation and Oxford Economics[5].

KEY FINDINGS

Good air connectivity is key to the UK regions, supporting local businesses and encouraging international visitors, whether for business or leisure.

Central to regional air connectivity is access to the London hub. Heathrow's lack of capacity severely constrains this access today – and this would not change with a third runway; only a 4-runway hub could support better regional connectivity.

Nor is Gatwick the answer – it is not a hub so cannot offer the connectivity the regions need; the limited connecting traffic also limits the frequency of Gatwick's domestic routes – and in many cases, undermines their viability.

Direct international routes to the UK regions are welcome, but cannot substitute for the unique global access – in terms of destinations and frequencies – that can be offered via an unconstrained London hub.

3. The observed decline in regional connectivity

The factors behind the decline in regional connectivity

3.1. It is clear that the reduction in domestic air connectivity – and especially to London – has resulted from a combination of factors, including:

- capacity constraints at Heathrow in particular;
- recession related falling demand;
- increases in Air Passenger Duty (APD);
- a switch to rail, particularly as a consequence of the West Coast Mainline upgrade in the period 2004 to 2008;
- growth of alternative hubs.

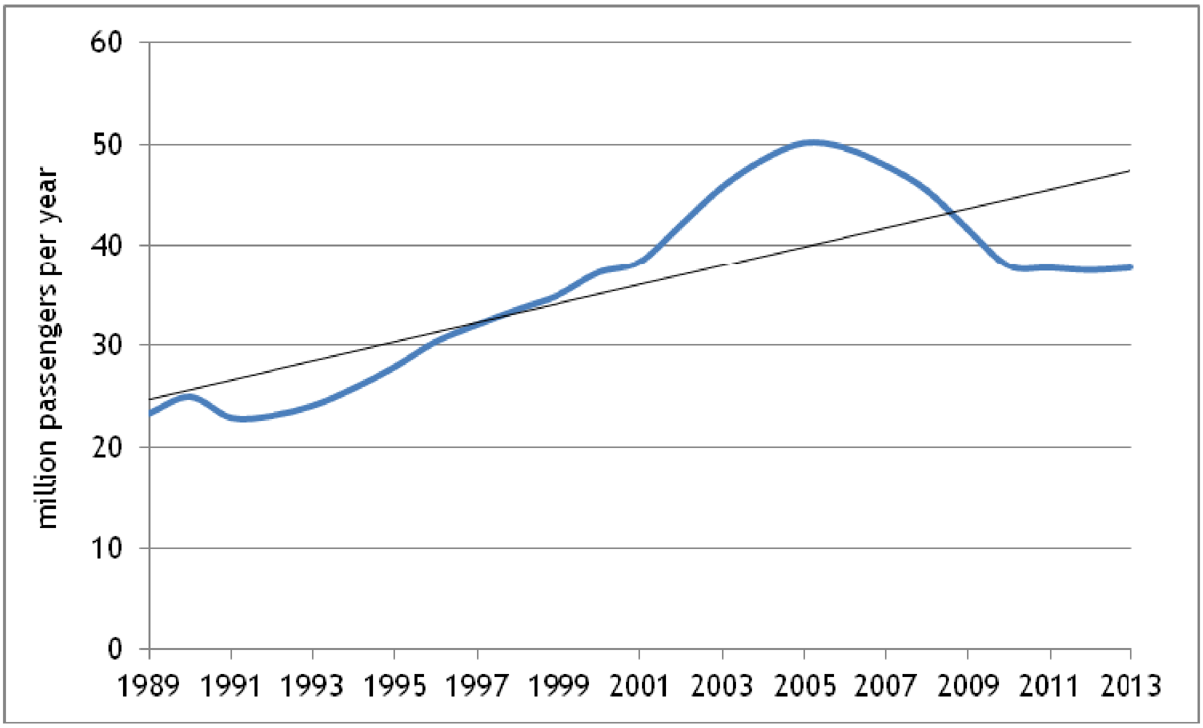
The decline in connectivity should not be assumed to be the long term background trend

3.2. Some caution should be applied in ascribing a long term trend to recent performance, which has been influenced by the effects of a particularly prolonged recession and other factors whose effects are unlikely to be replicated in the medium term, including:

- rail improvements, which will not be replicated, arguably, until HS2;
- APD, which is less likely to see step changes in future; and
- the impact of enhanced security measures and the impact on processing times.

3.3. Overall, despite the recession, increases in tax and improvements in rail services, the long term trend for domestic air travel is upwards (Figure 1), albeit at a slower rate more recently. This graph illustrates the very rapid growth in domestic connectivity in the 2002 – 2006 period, which coincided with the low cost growth 'bubble'. This 'bubble' of growth in both domestic and international direct services has proved to be unsustainable in the face of broader economic issues and this has implications for the interpretation of recent patterns of growth seen at regional airports.

Figure 1: Domestic Traffic at UK Airports 1989 to 2013



Source: CAA Statistics

3.4. Nonetheless, the Commission's own observation suggests that the apparently slow recovery in the domestic air travel market is a direct consequence of constraint on capacity at the main London hub. As such, the trend will also to some extent be flattered by the non-London component of domestic air travel which should recover more quickly, unaffected by the hub capacity constraints.

Declining business passenger numbers at regional airports is not simply a reflection of declining demand

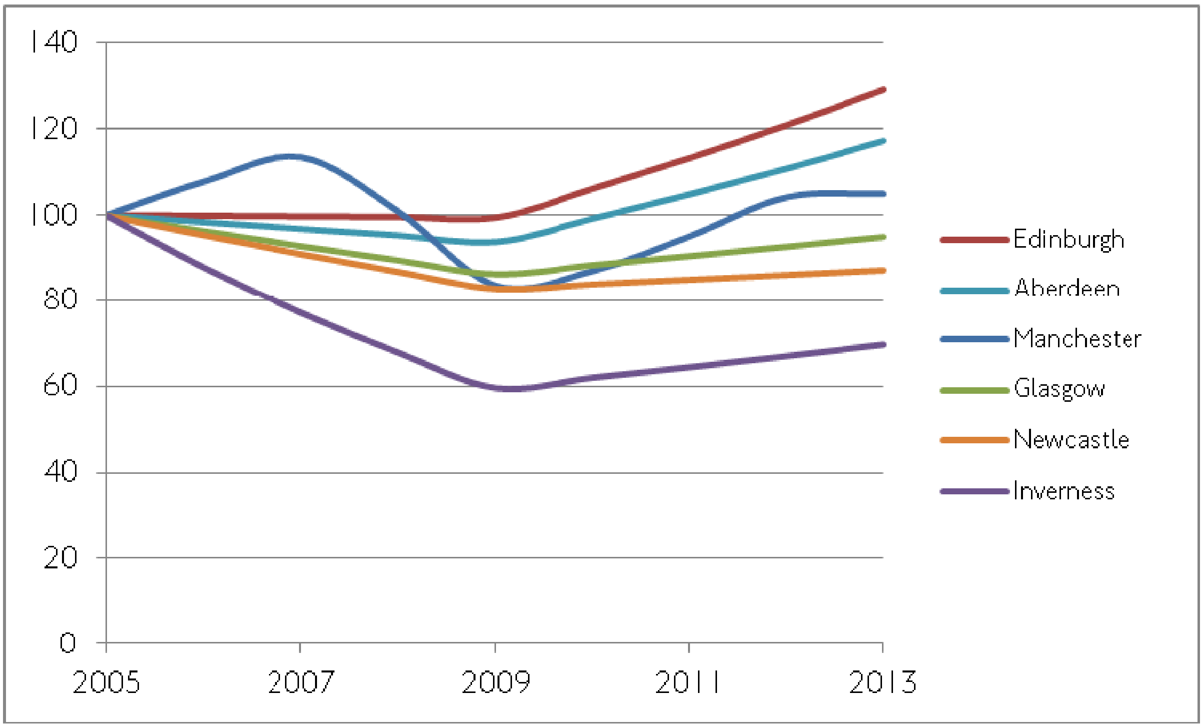
3.5. Business passengers are important component of demand – both in terms of the economic benefit to the region they represent, whether inward investment or trade, and with regard to the improved yield for airlines, supporting the viability of routes.

3.6. The Commission makes play of the apparent decline in business travel demand from the regions (DP06, paragraph 1.47) but fails to make the connection that one reason for the reduction in business related air travel is the loss of domestic connectivity to the hub. As set out in Figure 4 below, even at Heathrow, domestic flights carry a higher proportion of business travellers than international flights. The fall in business passenger numbers and proportions at regional airports may be no more than a manifestation of the consequences of displacement or restrictions on air access to the UK's hub airport.

3.7. This view is reinforced by data for business patronage on international flights to the regions, as per Figure 2. Though a lower proportion compared to domestic routes, there is clear evidence of a steady recovery following the recession, from 2009 onwards. Hence, the overall pattern cited by the Commission (DP06, Figures 1.6 and

1.7) may, at least in part, reflect the effect of increasing slot constraints on the levels of business passenger demand at regional airports. It may also reflect simply the faster growth of leisure passenger demand rather than real reductions in regional business demand.

Figure 2: Index of international business passengers at Key non-London airports



Source: CAA Passenger Survey (some extrapolation for years not surveyed)

3.8. It is also notable that numbers of business passengers travelling to London from regions to access flights has increased, as shown in Table 1. This may be a reflection of the pattern identified by the Commission (DP06, paragraph 1.45) of reducing services to business orientated destinations, but also demonstrates the robustness of the underlying market and shows that where domestic air connectivity has been restricted, the underlying demand has switched to road or rail at least to some extent to access the London hub.

Table 1: Business user surface origin for the four main London airports (000s)

	2004	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
North East	22	30	43	39	52	43	27	41	30	44
North West	61	78	105	120	130	123	101	98	97	102
South West	985	1059	1082	1133	1136	920	945	1022	1009	1037
Wales	178	227	202	230	248	215	193	196	247	268
Yorkshire & H	122	185	198	193	203	180	208	206	155	174
TOTAL	**1368**	**1579**	**1630**	**1715**	**1769**	**1481**	**1474**	**1563**	**1538**	**1625**

Source: CAA Passenger Survey

[Regions from which flights and surface modes are reasonable alternatives for London airport access]

3.9. Hence, the evidence suggests that regional business markets are still growing and will grow in the future. It needs to be recognised that identifying significant long term trends from data over the last decade is problematic.

3.10. Whilst it is fair to note that regional economies have been slower to recover from the recession than that of London and the South East, great care needs to be exercised in assuming these markets will not recover and that the need for regional connectivity to London and the hub will not increase again. Moreover, enhancing regional connectivity has an important role in supporting recovery and growth in the regions.

KEY FINDINGS

Regional demand for aviation is not in terminal decline – but regional connectivity has been damaged by the capacity constraints at Heathrow. Addressing this will help support growth and recovery across the UK.

4. The impact of continuing capacity constraints at Heathrow

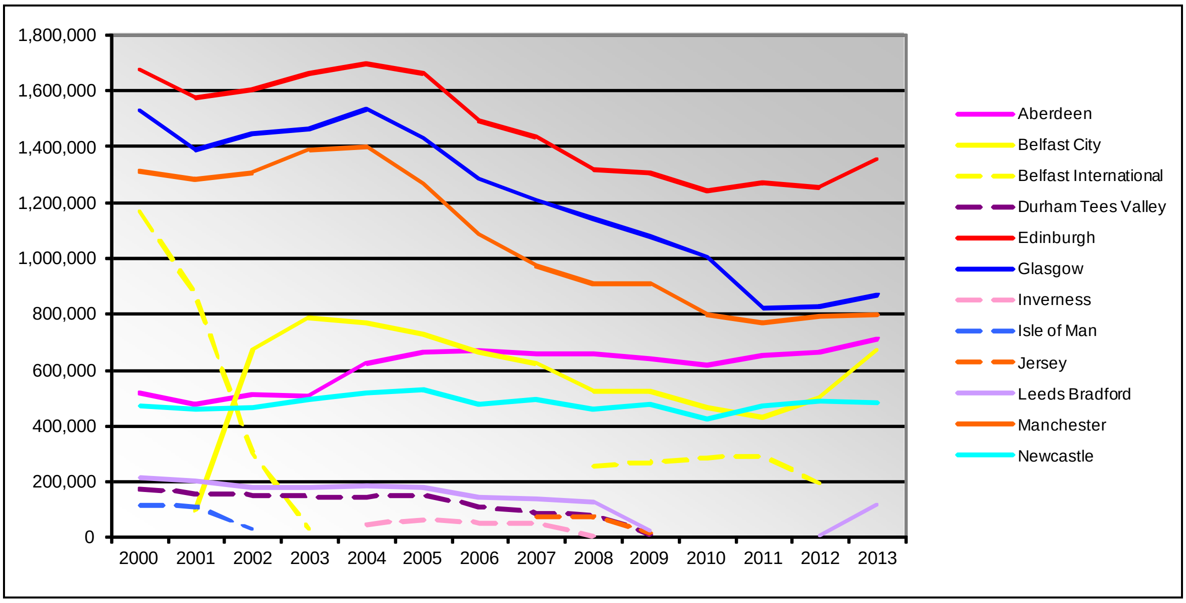
The role of Heathrow's capacity constraints in eroding regional connectivity

4.1. The key factor in falling air connectivity to London has been the airport capacity constraints at Heathrow. Eleven UK airports (including the Isle of Man and Channel Islands) have lost services to Heathrow since 1990[6].

4.2. Indeed, its Interim Report, the Commission recognises this as the particular challenge for regional connectivity: "*Capacity constraints at Heathrow have also affected domestic connectivity to the airport… In terms of overall connectivity, whereas London's connectivity is on a clear upwards trend since the effects of the recession, the weakening in links to Heathrow has contributed to a continuing decline in (regional) connectivity as measured using the IMF weightings*" (IR, paragraphs 3.85-3.87).

4.3. The response to the slot constraints by airport and airlines alike has seen many domestic routes, typically lower volume, priced out (the flaw in this approach is highlighted in the next chapter). Routes to many smaller regional airports have been most vulnerable as illustrated in Figure 3 below. Historically, domestic routes were sustainable at Heathrow at around 150,000 passengers per annum but today the threshold has risen to around 400,000 passengers per annum as smaller routes have been squeezed out.

Figure 3: Annual passengers on domestic routes at Heathrow 2000-2013



Source: CAA Airport Statistics

4.4. There is also no indication that the other London airports have provided a viable alternative to access to Heathrow, with only some services replaced by connections to other London airports. Many of these domestic air service connections need the mix of origin/destination and connecting demand to be viable – and the other airports simply do not provide the connecting opportunities. This is evident from the pattern of onward connecting traffic using the London airports, which is unsurprisingly dominated by Heathrow. To some extent, connecting passenger flows via the other London airports were artificially sustained at Gatwick by the operation of a range of US services from the airport which were constrained by the bilateral air service agreement from operating at Heathrow. This underpinned an attempt by BA to develop Gatwick as a hub but, as the Commission identifies (DP06, paragraph 1.30), was ultimately unsustainable once the restrictions were removed and the airlines could consolidate their US operations at the hub.

4.5. It is important to recognise that the existence of capacity constraints distorts the market. Hence, the pattern of connectivity to London today may not reflect the true nature of regional demand and the pattern of services which would exist in the absence of capacity constraints. The "Making Connections" report sets out the pattern of domestic air connectivity to a London hub which could be achieved in the absence of these constraints[7]. If there is adequate capacity, there is no need to price out domestic services, either directly or indirectly through the opportunity cost of using a scarce slot, and the ability to combine both O/D and connecting passenger demand will enable substantially more regional air connections to be operated sustainably, and with higher frequencies. The work undertaken for "Making Connections", underpinned by a detailed analysis of local demand, showed that, without the hub capacity constraints, up to 63 more regional flights per day could be operated by 2050, serving 8 new UK cities.

A three runway Heathrow will not solve the problem

4.6. It is also clear that a 3-runway Heathrow does not offer a solution to the severe capacity constraints. According to the Commission's Interim Report, "forecasts indicate…the expanded airport operating at around 80-90% capacity by 2030" (IR, paragraph 6.88). This leaves the airport in little better position than today, with resilience and delays a regular feature of operations and with little if any slot availability at peak times.

4.7. The lack of slots at key times is a real problem for a 3-runway Heathrow. Domestic flights need to be attractive to both O/D and connecting passengers if they are to ensure sufficient traffic to be commercially viable; slots in the morning and evening peaks will just not be available if the airport is running at an average 80-90% capacity across the whole traffic day. It is no coincidence that Heathrow's main European rivals operate around 75% capacity, closer to industry best practice.

4.8. In short, shortly after the opening of a 3rd runway, Heathrow would effectively be full - the same factors that squeeze out many domestic services today would equally apply in this scenario. The analysis by York Aviation estimated the impact this would have on the domestic network from the hub, set out in Table 2 below.

Table 2: Domestic flights to London hub in 2050 under various scenarios

	No Expansion	3-runway Heathrow	4-runway new hub
7 existing hub routes: Aberdeen, Belfast, Edinburgh, Glasgow, Leeds Bradford, Manchester, Newcastle	Reduced service 20 fewer flights daily Leeds route lost	Reduced service 6 fewer flights daily Leeds route lost	Enhanced service 12 extra flights daily Leeds route retained
8 potential new hub routes: Cardiff, Dundee, Durham Tees Valley, Humberside, Inverness, Liverpool, Newquay, Plymouth*	No service	No service	New services launched 31 extra flights daily

[Flight frequency comparisons versus Summer 2013 schedule]

**based on Plymouth airport reopening*

4.9. Only a 4-runway hub can meet the connectivity needs of the regions, enabling many more domestic routes and frequencies to/from the hub than would otherwise be possible.

Key Findings

Declining regional connectivity to London has been driven by Heathrow's capacity constraints. 11 domestic routes have been lost from Heathrow since 1990.

A 3rd runway does not solve the problem as Heathrow would be full shortly after opening – with slots unavailable at the most attractive times. The result would be as today, with more domestic flights squeezed out.

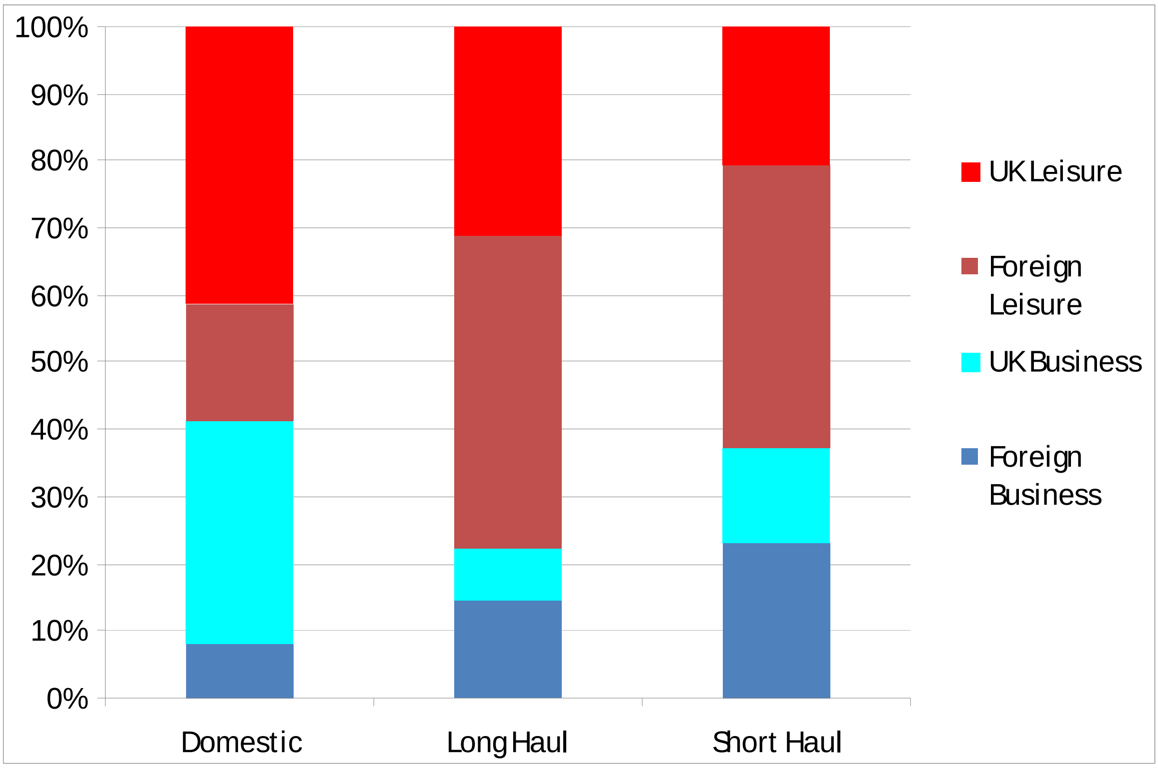
Only a new 4-runway hub will ensure the capacity to provide the regional connectivity that the UK economy needs; analysis by York Aviation shows that it will enable up to 63 additional domestic daily flights, including 8 new destinations around the UK.

5. Delivering the best economic solution for the UK

Maximising passengers per Heathrow slot does not equate to maximising economic value

5.1. There appears to be a general presumption that the best economic solution to making optimum use of existing capacity is equivalent to the maximum use being made of slots at constrained airports in terms of the highest possible number of passengers able to use them. However, this may not be the same as achieving maximum economic value from a slot once the mix of passengers and the wider economic value is taken into account. This runs counter to the CAA's conclusion (DP06, paragraph 1.19) that squeezing out of domestic services from congested airports does not have the effect of wider damage to regional economic interests. This appears to have been looked at in terms of a narrow metric of how many passengers use the constrained airport, rather than focusing on the cost and inconvenience to regional passengers and the wider economic damage done where regional connectivity is reduced.

Figure 4: Proportion of business traffic by flight type at Heathrow 2013



Source: CAA Passenger Survey

5.2. It is informative to examine the proportion of business passengers on different types of service at Heathrow as shown in Figure 4. Whilst the overall volume of passengers using domestic services at Heathrow is now relatively small in the context of the total scale of Heathrow operations, those domestic services carry a disproportionately high volume of business passengers, with domestic flights accounting for 10% of all business passengers using Heathrow (yet just 7% of all passengers). In other words, a single domestic service may well carry more economically valuable business passengers than the larger aircraft which replaces it. Volume and value are not necessarily the same thing, as the Commission appears to imply (DP06, paragraph 1.20).

Valuing enhanced regional access to the UK hub

5.3. Air connectivity can generate wider economic benefits through the impact it has on:

- foreign direct investment (FDI);
- trade;
- tourism;
- the labour market; and
- agglomeration effects.

5.4. For the UK regions, the London hub is key to that air connectivity, and the productivity gains that result, boosting GVA.

5.5. The currently constrained conditions at Heathrow – which will worsen over the longer term even with a third runway – are not delivering the best for the UK economy as a whole by pricing out domestic services or forcing the airlines to make choices in how they use scarce slots. This is not to say that domestic services should be favoured over new global long haul connections, rather that the choice which has to be made between the two types of service in a constrained hub environment is having perverse economic consequences, which are ultimately damaging the wider UK regional economy.

5.6. Only a new 4-runway hub airport can ensure the capacity to deliver the connectivity that supports the economies of the UK's regions. The work undertaken for the "Making Connections" report[8] found that a new 4-runway hub airport serving London would provide a £2.2bn economic boost to 15 major UK cities and deliver 18,000 jobs. This increased GVA and employment would directly result from the additional connectivity, primarily for business travel and air freight.

The benefit of connectivity for inbound tourism

5.7. It is worth taking particular note of tourism; the Commission is decidedly equivocal in its characterisation of the value of tourism, setting the benefits of inbound tourism exports against the implied imports of tourist services entailed by outbound tourism (DP06, paragraph 1.51).

5.8. However, this obscures an important reality; people living in the UK regions who decide to go on holiday abroad by plane, will largely do so, whether or not their local airport offers the flight connection; they might use a regional airport further away, or, as many business passengers, travel overland to a London airport to catch a flight.

5.9. By contrast, the lack of a flight connection option to a city or region – or one that involves a lengthy journey by road or rail – might mean a visitor from abroad not visiting at all; this is both a question of brand awareness (of the city/region) as well as ease of access. In the engagement undertaken by TfL, the value of connectivity was raised as being fundamental to attracting tourists by many regions such as the Highlands and Islands and Cornwall, both of whom felt disadvantaged by their road and rail connections. Even a city with good surface access links to other airports like Liverpool saw a direct hub connection to its own airport as a game changer. Particularly for attracting tourists from outside Europe, the connectivity that might be offered to these places via the hub is critical. The benefits of regional connectivity to inbound tourism, not least via the hub, should not be so readily discounted.

Enhanced connectivity to London benefits the regions and UK as a whole

5.10. For many regions of the UK, access to the economic powerhouse which is London is as important as wider global connections via the hub. London is a pre-eminent economic centre in its own right in global terms. Any reduction in the volume, frequency and competitiveness of air links to London will have detrimental economic effects for the region suffering a diminution of access over and above the loss of hub connectivity.

5.11. Moreover, the UK as a whole benefits from London's success; a successful UK hub also bolsters London's prosperity, which is good for the UK. By contrast, when UK passengers use a foreign hub in preference to a UK hub, this constitutes a net import of aviation services by the UK.

Key Findings

Hub domestic flights carry a disproportionately high volume of number of business travellers – and so should not be readily traded off for an international route which might carry fewer economically valuable business passengers.

Air connectivity can bring important benefits in terms of trade, foreign direct investment, tourism, the labour market and agglomeration effects. The particular importance of air connectivity to inbound tourism is keenly felt in the regions and should not be discounted.

A 4 runway hub will provide a £2.2bn economic boost to 15 major UK cities and deliver 18,000 jobs, through the enhanced connectivity.

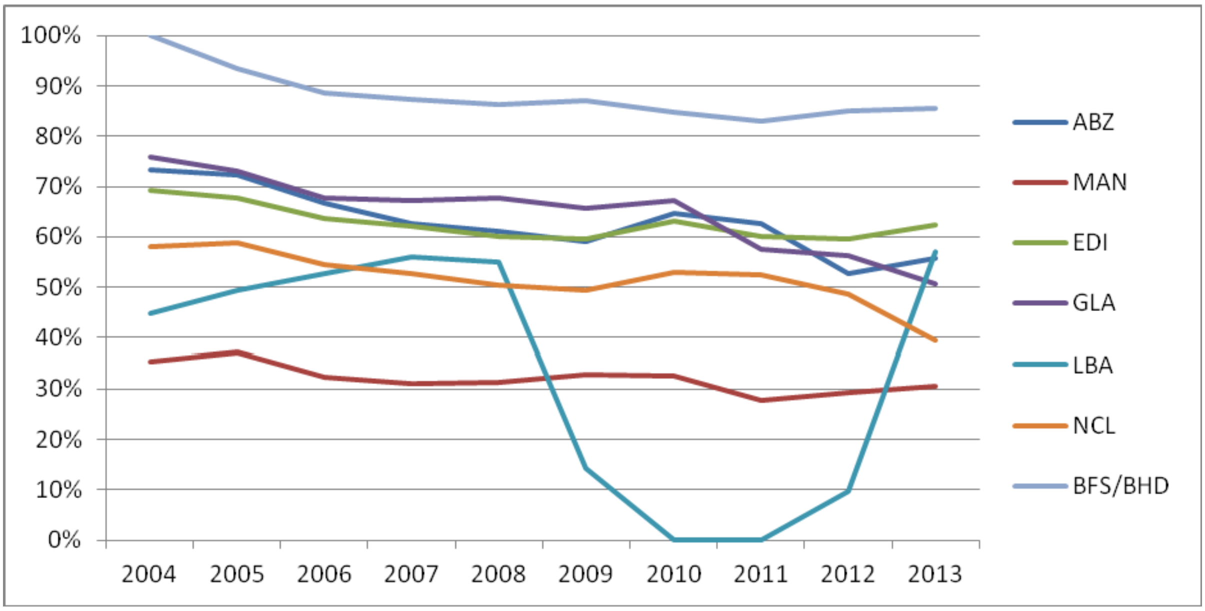
Enhanced regional connectivity to London is valuable in itself. Moreover, developing the UK hub benefits both London and the wider UK economy.

6. Better direct international links for the regions – and the limitations

As Heathrow services have been lost, routes to other hubs have expanded

6.1. It is evident that as connections to Heathrow have declined, there has been growth in services to other hubs. This is a result of both push and pull factors. The proportion of hub connectivity (airline hub seat capacity) provided by Heathrow over time at a selection of UK regional airports is illustrated in Figure 5 below. To a large extent, with the exception of Leeds Bradford, the pattern is that of a slow but steady decline.

Figure 5: Seat capacity at regional airports: Heathrow flights as proportion of total



Source: OAG

6.2. At the same time, the findings of the Commission (DP06, Figure 1.4) show the growth in passengers connecting via other hubs since 2001. The worsening capacity constraints at Heathrow have enabled others to catch up and grow without any direct competition from the constrained hub.

6.3. The Commission is right to acknowledge that there might be additional factors driving the shift from Heathrow to foreign hubs, notably service. Heathrow's severe capacity constraints and its highly constrained location undermine its ability to offer the experience that passengers expect; operating close to capacity, even the smallest disruption can lead to lengthy delays, while the terminal layout extends the time and effort required to change planes. A 3-runway Heathrow, effectively full shortly after opening – and with a layout possibly more convoluted than today – will not improve the attractiveness of Heathrow for transferring.

6.4. The main beneficiary of Heathrow's capacity and experience shortcomings has been Amsterdam Schiphol. Schiphol offers flights to 27 airports in the UK compared to Heathrow's seven. This has enabled Schiphol to build up significant transfer flows, that support its hub and the range of routes and frequencies it offers, giving Amsterdam and the Dutch economy a competitive advantage in attracting trade and inward investment – particularly for certain industries where direct connectivity is a key advantage. With more passengers connecting through Schiphol instead of Heathrow, this has been at the expense of London and the UK economy.

Links to foreign hubs cannot make up for loss of Heathrow services

6.5. There are also drawbacks specifically for UK regions if relying solely on foreign hubs. The driving factor in the development of alternative hub connections is the extent to which they are viable. For a hub carrier, it will seek a mix of O/D and transfer traffic to sustain a route viably[9], with typically a minimum of 30% O/D traffic to mitigate the dilutionary effect of offering connecting fares. Hence, for many regional airports, this may limit the scope to support alternative hub connections as O/D markets are simply not strong enough to underpin a hub service.

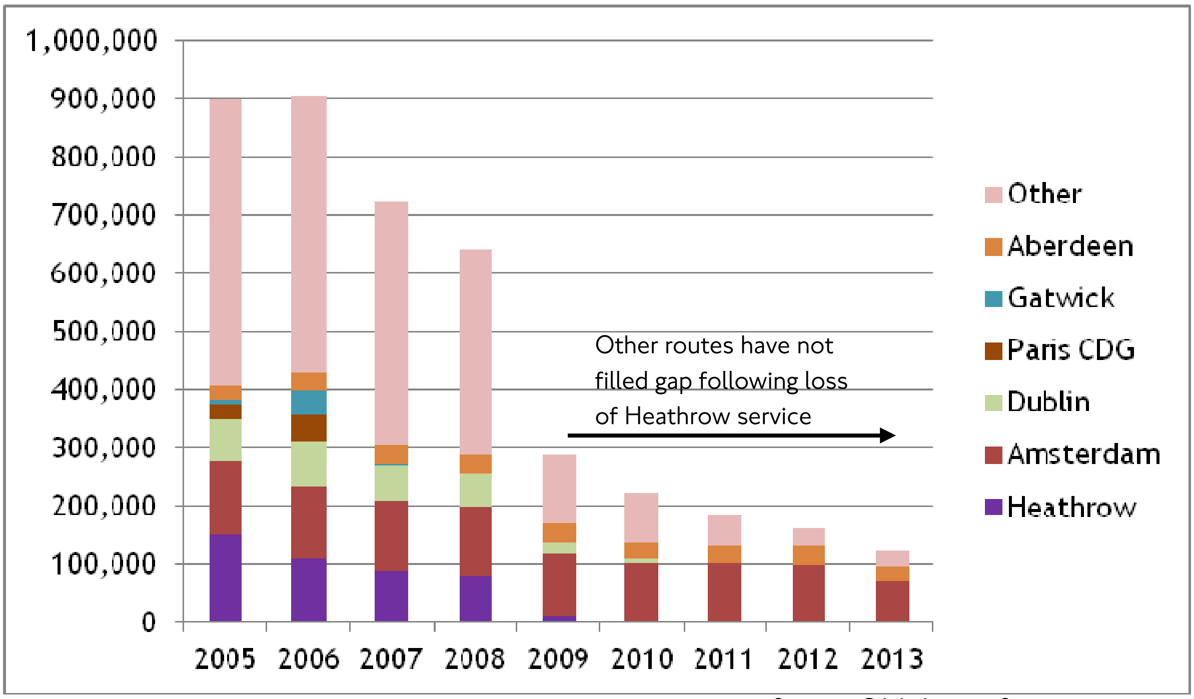
6.6. However, London is a much more significant O/D market for most UK regional airports – so providing a stronger demand base and increasing the viability of the services. This level of demand means an unconstrained London hub will almost always be able to offer a higher frequency of service than alternative hubs, making connections more convenient with shorter connecting times on average.

6.7. Regional markets have 'found a way' to access the connectivity needed via other hubs, albeit not with universal success; many regions have been left with a connectivity deficit where the London hub connection has been displaced and the market has not been sufficient to sustain an alternative connection.

Loss of Heathrow routes particularly felt by smaller regional airports

6.8. Whilst, as the Commission notes, the larger regional airports can support a broader portfolio of services, for smaller regional airports global connectivity is exclusively secured through hub connections. The loss of a hub connection can have significant implications for connectivity, as evidenced by Durham Tees Valley. From Figure 6, it is clear that the loss of the Heathrow service was not matched by a corresponding up turn in connections to other hubs. Hence, this region has suffered a loss of convenient hub connectivity. This has been compounded for this airport by the recessionary downturn in leisure markets, which are not yet recovering. In these circumstances, the loss of a Heathrow connection – and the blow to airport passenger throughput entailed - can be a key contributory factor to the financial difficulties being experienced by several regional airports such as Durham Tees Valley.

Figure 6: Passengers by route at Durham Tees Valley Airport



Source: CAA Airport Statistics

6.9. This pattern is repeated at many of the smaller regional airports and the loss of a hub connection represents both a loss of direct activity at the airport, and hence local jobs and GVA, as well as reflecting a loss of wider economically beneficial connectivity. Where regions are competing for investment and economic activity, it can be little consolation that another airport may be available within 1 or 2 hours as this does not alter the perception that the region is less well connected and leaves it at a competitive disadvantage in attracting foreign direct investment (FDI) in particular.

Limits of direct regional routes, particularly for serving long haul markets

6.10. Direct international flights for regional airports are welcome, but there are limits as to the connectivity then can offer, even for the larger regional airports. The catchment of even the larger regional airports for any given route is typically smaller than the equivalent route market from London and the southeast. Moreover, this does not factor in the higher premium share of passengers in the London and southeast catchment.

6.11. This is particularly true for global long haul markets. These factors are significant to the airlines, which seek to 'de-risk' setting up new long haul services by ensuring that there is a balance of demand at both ends of a route and an underpinning volume of business traffic.

6.12. Table 3 sets out the comparative size of some of the largest long haul route markets, from the Midlands (Birmingham) and the North (Manchester), and specifically markets with over 100,000 passengers per year, alongside the catchment of London and the south east.

Table 3: Comparison of key long haul market sizes, 2013

	Greater South East	Midlands	North
New York JFK	1,310,121	92,351	161,699
Dubai	758,790	160,941	224,831
Sydney	636,035	88,914	132,857
Hong Kong	489,020	109,265	123,103
Toronto	447,466	65,177	115,291
Orlando	424,926	138,672	277,697
Bangkok	365,783	114,022	179,127
Perth	316,178	67,290	104,856
Las Vegas	265,777	70,267	113,581
Cancun	243,227	102,453	156,193

Source: CAA Passenger Survey 2013

6.13. It is clear that the scale of demand to support route is much greater from the London area – in the case of JFK over 10 times the demand of the Midlands catchment. This illustrates why even the larger regional airports can only develop a more limited range of direct long haul services.

6.14. Moreover, the longhaul routes that are viable from the major UK regional airports, are almost exclusively focused on VFR (visiting friends and relatives), feeder connections into foreign hubs and outbound leisure [10]. The latter is evidenced by the relative strength of the regional markets for Bangkok, Las Vegas and Cancun.

6.15. So, even for the larger regional airports and the regions that they serve, hub connectivity will always be important to provide connectivity to the full range of global cities which simply cannot be served direct.

The London hub is key to offering global connectivity for the regions

6.16. In this context, access to a London hub is important as the sheer scale of the London air travel market – the largest single air travel market in the world – could support a wider range of air service connections than any other hub provided that sufficient hub airport capacity is available. In this sense, a London hub is not competing with non-London airports for airline capacity but is complementary in providing a valuable addition to global connectivity. Access to the hub in London would provide access for regional economies to destinations to which:

- their local airport would be never likely to support anyway; and
- other hubs are not likely to support or that are only offered by hubs to which connections are unlikely because of limited local O/D demand.

6.17. Hence, whilst there is a premium on direct connectivity, it has to be recognised that for all regional airports, to a greater or lesser extent, the full range of connectivity can only be offered via a hub. Development of regional airports, and the connectivity which they provide, is important to securing regional economic growth. Regions that lack convenient air service access are immediately placed at a competitive disadvantage in attracting economic growth and tourism, whilst the airport itself can be a vital direct contributor to local economic activity which is enhanced through the provision of the hub connection itself.

Key Findings

While regional routes to Heathrow have steadily declined, there has been a notable increase in links to foreign hubs from a number of regional airports; for example Schiphol now serves 27 destinations in the UK – versus just 7 from Heathrow. This gives foreign hubs and their economies a competitive advantage.

Moreover, there are limits to the potential of such foreign hub routes fore regional airports – the weaker O/D markets limit their frequency – and ultimately their viability. Routes to foreign hubs are largely unviable from the smaller regional airports.

For most routes – including the majority of longhaul destinations – no regional airport will be able to sustain direct flights; that is why frequent access to an unconstrained London hub is essential.

7. Heathrow constraints eroding the commercial viability of regional airports

Heathrow slot constraints harm the viability of small regional airports

7.1. As noted above, the loss of a London connection can be significant for a regional airport. The London route is often the highest volume route in an airport's portfolio. Hence, in the context of the high fixed costs of operating an airport, the loss of a London service can leave the airport unable to cover these fixed costs. With hub connectivity a key part of sustaining a London link – combining both O/D and transfer traffic – there is a direct correlation between the ability to offer flights to a London hub and sustaining the commercial viability of at least some of the smaller regional airports. In terms of overall airport viability, growing passenger volume is key both to cover fixed costs and to provide sufficient footfall to support a wider range of commercial outlets and deliver higher non-aeronautical incomes.

7.2. Hence, it is vital that the Commission effectively diagnoses the prospects for regional airports and how their success is inter-related to the development of services to the London hub.

The role of the market

7.3. Unlike some countries where every commercial airport is owned and operated a single state entity (e.g. Avinor in Norway or Aena in Spain), the British regional airport landscape is characterised by a plurality of airport operators. This has generally served the UK well, allowing airports to find their role relative to the local market and regional competitive landscape. It is not clear that it would be a progressive step for Government to determine the optimal number of airports or the extent to which regional airport demand might consolidate around fewer bigger regional airports; these are questions that can largely be left for the market, with input from local stakeholders.

7.4. However, this market can only operate effectively on a level playing field; as described above, the business model of the smaller regional airports is disproportionately harmed by the slot constraints at the UK hub, which undermine their ability to offer the key London link; this is where Government action is required, to deliver sufficient hub capacity, to remove this distortion from the operation of the regional airport market.

KEY FINDINGS

Smaller regional airports are disproportionately reliant on a few high volume routes, notably a link to the London hub.

As such, the constraints at Heathrow are distorting the regional airport market and ultimately threaten the very survival of some regional airports.

8. Are there mechanisms to support routes from non-London airports?

Legal constraints limit the scope for support to regional airports

8.1. Fundamentally, the mechanisms available to support regional airports and the development of services rely on the working of the market. To the extent that the constrained capacity at Heathrow limits hub connectivity, this is a distortion of the market which it would be desirable to eliminate.

8.2. In terms of other mechanisms to intervene to promote the development of services from regional airports, it is reasonable to assume that these will continue to be limited by EU law, with intervention only allowed under strict criteria and where there is a demonstrable failure of the market.

8.3. The EU guidelines on state aid in the airport sector make clear that, other than in exceptional circumstances, aid can only be provided to the smaller airports handling less than 3 million passengers per annum. Route development support is also limited to intra-EU routes unless a region is designated as a remote region. Hence, the scope for route development funding to secure global connectivity is limited except to provide a mechanism to connect a smaller regional airport to a hub. In any event, such funding can only bring forward routes that eventually will be viable in their own right: any such aid is time limited and is allowed on the basis that the airline business plan shows that the route will be sustainable once the support has ended. Ultimately, the use of regional route development or connectivity funding is limited in its impact to routes which can be sustained by the catchment area of the airport concerned. Larger regional airports such as Birmingham, Edinburgh, Glasgow or Manchester, where long haul routes can be viable, are simply too large to avail of funding support.

8.4. Some have proposed APD holidays, particularly for new long haul routes where the impact of APD can be most keenly felt. However, this would have to be shown compatible with EU law – and would require Treasury agreement – and could only be a short term measure to start routes that would have a reasonable chance of becoming viable. Politically it would also risk turning APD into what might be perceived as a tax on the larger cities.

There are no regulatory shortcuts for providing domestic access to the hub

8.5. In terms of securing regional connectivity to London, the principal mechanism allowed under EU law is the designation of the route as covered by a Public Service Obligation, where a route is deemed essential for the economic and social development of a region. Traditionally, these have not been widely used in the UK, other than to secure vital lifeline connections in the Highlands and Islands of Scotland and connecting North and South Wales. However, recently, the Government has designated routes between London and Dundee and London and Newquay as PSOs, following requests from local and regional governments. The designation of a PSO imposes a minimum frequency of service and conditions on air fares. However, critically, the designation of a PSO must take into account the availability of alternative connections between cities. So if services exist to another London airport or where adequate regular surface connections exist, in particular rail access of less than 3 hours, a PSO would not be supported. This imposes significant restrictions on the scope to which PSOs could be used to secure access to a constrained hub. Of the cities identified in "Making Connections" as having the potential to be reconnected to London by air if sufficient hub airport capacity exists, only Plymouth (assuming that the Airport is reopened) would meet the criteria for a PSO to be approved, having no suitable alternative rail or air connection currently.

8.6. Only if a PSO has been imposed on a specific route, can unused slots be reserved for such a service. The EU Slot Allocation Regulations are definitive on this point. Whilst the Regulations do make a provision for local rules to be agreed through the airport specific co-ordination committee, any such rules cannot discriminate in terms of the nationality of the carrier or in favour of domestic over intra-EU routes.

8.7. If the hub is capacity constrained in 2030 – as it would be with a 3-runway Heathrow – then there is little scope for any growth in domestic flights. There is no regulatory or legal trick that can be called upon. Irrespective of the 'National Connectivity Taskforce' that Heathrow Airport are now hastily setting up in response to regional concerns, there is no quick fix for regional access to the hub short of providing sufficient new capacity; this requires a new 4-runway hub airport.

The UK connectivity need is not met by making different trade-offs

8.8. As has been discussed, the UK hub today does not have the capacity to offer a full range of domestic services. In these slot-constrained circumstances, airlines make rational trade offs in their economic self-interest; this has typically included domestic and other shorthaul services being sacrificed for lucrative established longhaul routes.

8.9. But the UK economic need is not met by making different, "better" trade-offs – only by having sufficient capacity to avoid trade-offs altogether. The role of the state should lie in making sufficient infrastructure available to allow markets to operate, subject to overriding social constraints such as environmental considerations. Whether domestic, European or longhaul route, each is key to maximising UK connectivity. This is a matter both of securing good connectivity from every region of the UK, via hub and ensuring the viability of widest range of routes and frequencies from hub (thanks to the greater transfer traffic flows). If a legal mechanism can be found to prioritise one set of routes, it simply has the effect of undermining a different, no less important, element of the hub's connectivity.

8.10. In summary, there is no shortcut to providing regional access to the UK hub airport, short of ensuring sufficient capacity at the hub is available.

Key Findings

There are no legal or regulatory shortcuts for providing significantly enhanced regional connectivity.

As such, there is no quick fix that can address the squeezing out of domestic routes from a 3-runway Heathrow, effectively full by 2030.

There are no "better" capacity trade-offs to meet the UK economic need – one must ensure sufficient capacity to avoid trade offs altogether. Only a 4-runway hub can provide that capacity, to ensure the connectivity the UK needs.

9. The role of the other London airports

Being realistic about the role of the airports

9.1. It is important to have a clear understanding the development, nature and potential of the other airports (other than Heathrow) that make up the London airports system. Firstly it is important to understand that London does not have six airports by design; it is, to a significant extent, a function of the capacity constraints that exist at Heathrow.

9.2. Moreover, the Commission's claim for specialisation (DP06, paragraph 4.5) is greatly overstated. The notable exception is London City which serves a particular shorthaul business niche, and results from its relatively central location. However, that location, amidst a dense urban area, means it is rightly subject to a series of restrictions – especially in terms of permitted aircraft and hours of operation; these severely limit the scope for it to play a greater role in the London airports system.

9.3. The other four airports – Gatwick, Stansted, Luton and Southend – largely share similar characteristics, focused primarily on shorthaul low-cost point-to-point traffic. Though Gatwick has been able to attract some spillover longhaul routes from Heathrow, without the hub advantages, the extent of these routes is limited.

9.4. Where the airports do differ is in their geographic catchment, partially overlapping but each at the same time having a distinct hinterland, primarily the areas from which the airport is easily accessible outside London. This is evidenced by the many routes that easyJet serves from more than one London airport; indeed, to Amsterdam, Geneva and Malaga, easyJet offers flights from each of Gatwick, Stansted, Luton and Southend.

9.5. As such, choice between substantively different offerings is largely illusory; aside from their different locations, they are largely serving a similar destinations with a comparable mix of airlines. The issues around competition and choice were considered in greater detail in the Mayor's response to Discussion Paper 04[11].

9.6. Similarly, suggestions that the other London airports play an important transfer role, thus supporting denser routes, is largely spurious. According to the CAA data[12], just 4-8% of domestic passengers arriving at Stansted, Luton and City airports are transferring; the figure is higher at Gatwick (19%), in part because of its handful of longhaul routes and residual BA presence. But it is no surprise that the benefits of transfer traffic are most keenly felt at the hub: some 57% of domestic passengers arriving at Heathrow are transferring; to put it another way, 75% of all domestic passengers transferring at one of these five London airports is doing so at Heathrow.

9.7. Stansted and Luton airports offer some scope for growth, particularly as Gatwick reaches saturation. However, crucially, their ability to relieve the hub is more limited, as evidenced by the fact that, despite Heathrow's severe capacity constraints, Stansted remains only half utilised.

9.8. Whilst these airports will continue to make a useful contribution to meeting the local demand in their own catchment areas for primarily shorthaul European leisure services, the Commission rightly recognises (DP06, paragraph 5.42) that there is little likelihood that they can support significant development of longhaul routes.

9.9. As such, there is little to suggest that these airports can deliver an effective solution to meeting London's and the UK's need for global connectivity and regional access.

The other London airports: surface access constraints

9.10. Surface access is an important element of an any airport proposition. Schemes such as the upgrading and 4-tracking of the West Anglia Main Line, as taken forward in the National Infrastructure Plan, are beneficial in significantly enhancing the airport proposition – in this case Stansted – with improved frequencies and journey times. At the same time, they support forecast background growth in the corridor and unlock regeneration opportunities. It is important that publicly funded schemes address the needs of both airport and non-airport users, without seeking to compromise either.

9.11. Nonetheless, it is expected that, where a surface access scheme is predominantly for the benefit of airport users, the airport operator should meet its financial responsibilities for the scheme.

9.12. Further schemes should be considered in line with demand growth at the airports. The most notable deficiency is at Luton airport, which, unique amongst the six London airports, suffers from the lack of direct rail access.

The other London airports: planning constraints

9.13. The planning process makes a distinction between: i) the larger airport schemes, of strategic regional and national importance, allowing consideration of wider issues alongside specific local concerns under the NSIP process and ii) the smaller airport schemes which fall under the Town & Country planning processes and are more locally focused. This approach is broadly sound. It remains essential that due consideration is given to the views of local communities who could bear the consequences of a poor planning decision for many years to come.

9.14. With regard to lifting planning caps, it is important to remember that these are not arbitrary constraints on aviation activity but essential safeguards to curb some of the most severe impacts of flights on local populations. They must not be lifted without proper consideration of their impacts, including full public consultation.

9.15. It would also seem premature to consider lifting planning caps when most of the other London airports are operating markedly below capacity. Moreover, it is hardly possible to build a case for lifting the caps so long as the question of where to provide strategic aviation capacity for London remains open.

The other London airports: other constraints

9.16. With regard to airspace, NATS are currently embarked on a process to recast the airspace above London; in its early phases, this will be strongly affected by the Commission decision on strategic aviation capacity; it clearly does not make sense to consider the other London airports in isolation from this. However, what remains important is the process of consulting on the changes is open and transparent, making clear to the public what the implications of any changes will be.

9.17. The other London airports have the commercial freedom required to operate their airports competitively. Nor are there further regulatory, tax or legal constraints that merit consideration.

9.18. In general, the other London airports have shown themselves able to operate effectively in a competitive market for air services; they should continue to do so, within their existing parameters, irrespective of the final Commission decision on the provision of strategic aviation capacity in Autumn 2015.

9.19. Moreover, it remains essential that consideration of improvements in the short and medium term at other London airports not be allowed to distract from securing a solution to the vitally important problem in the long term, that of the UK hub's declining connectivity.

KEY FINDINGS

All the other London airports (with the exception of City airport) serve a similar function, with a broadly similar mix of airlines and routes, but with different, overlapping catchments.

There is scope for surface access improvements, notably for the West Anglia Main Line to Stansted, to make better use of existing capacity, while at the same time meeting non-airport transport objectives.

In general, these airports will continue to play a useful supplementary role – without the need for significant intervention such as raising planning caps; but they cannot substantially alleviate the severe hub capacity constraints (at Heathrow).

APPENDIX A: Airports Commission questions presented in Discussion Paper 06

[including the section of this document in which they are addressed]

Is the Commission correct to identify a reduction in air connectivity between the UK regions and the London airport network over the last decade? How do recent new routes to the capital, and the stabilisation in passenger numbers on domestic routes to and from London since 2010, affect this analysis? [3.1]

How do respondents view these trends developing in the future? [3.2]

Is the Commission's analysis of the multiple factors influencing domestic air connectivity between London and the UK regions accurate? Of the factors outlined, which are the most significant or important for explaining how the market has developed? What additional factors, if any, should the Commission be mindful of? [4.1]

Is overall transport connectivity between London and the regions at an appropriate level? What are the social or economic consequences of changes to air connectivity? Can respondents provide any comparisons or other evidence to support their response? [4.5]

What future trends do respondents envisage in domestic air connectivity excluding routes into London? How relevant are the factors explored in relation to London and the regions for these other domestic routes? [3.5]

Is the Commission correct in its analysis of changing purposes of travel and routes types at non-London airports? What are the drivers and ramifications of this trend? [3.5]

Is the Commission right to identify particular financial challenges for smaller airports? Can respondents corroborate or refute any of the Commission's evidence on financial pressures at regional airports? [7.1]

Is the Commission accurate in its analysis of the market dynamics affecting the non-London airports sector? Is the Commission correct to identify a broad trend, especially since 2007, in larger regional airports retaining or building their route networks, whilst smaller regional airports' route networks shrink? What explanations can respondents provide for this trend? [6.8]

Can respondents provide any evidence to counter or support the Commission's analysis of the UK population having quick access to relatively high numbers of airports, or to build on the Commission's comparison between the UK and other countries' airport networks? What analysis ought the national or local Government undertake when faced with a potential airport closure? In the longer term, what is an appropriate, adequate or ideal shape for the UK's airport system? Is consolidation of the airport network desirable, inevitable, both or neither? [7.3]

Has the Commission correctly identified the major options to support or bolster the regional airports sector? Of the options here explored, which have the potential to be most beneficial? Can respondents suggest means of bringing about positive change in the context of these options? What recommendations could the Commission make in these areas? [8.1]

Are there longer-term or more extensive surface transport improvements and developments (beyond those committed to in the National Infrastructure Plan) that could support the other London airports to make best use of their capacity? Are there any ways that government, or any other stakeholders, could improve airport site access? Are there any innovative ways that airports could resolve site access problems? [9.10]

Are there particular pros and cons to airport developments moving through the NSIP or Town and Country Planning process for a) developers or b) communities? Could either the NSIP or Town and Country planning process be improved, either the process itself or development of supporting policy, to support developers and meet the needs of local communities? [9.13]

Is there a current case for lifting planning caps for any airports in London or the South East? If not now, when should these caps be reviewed? [9.14]

Are there any actions stakeholders could take to support airports in mitigating their commercial constraints? Are there any examples of best practice in this area? [9.17]

Are there any medium term airspace developments that could support making best use of capacity, beyond those set out in the Interim Report? Are there any innovative long term airspace developments which could provide support beyond those set out in the Interim Report? [9.16]

Are there any new data available that the Commission should review in reference to its conclusions on regulatory tax or legal changes that could alter our assessment of their usefulness in making best use of capacity? Are there any areas of legal, tax or regulatory constraint, not considered by the Commission in its Interim Report, which merit further review? [9.17]

Are there any topics or areas of further study beyond those set out in the Appraisal framework, that would allow the Commission to understand the impact of development at Heathrow or Gatwick on the other London Airports? [9.18]

APPENDIX B: Regional engagement events

TfL has, on behalf of the Mayor of London, engaged with a variety of stakeholders from business , local government and the devolved administrations across England, Scotland, Northern Ireland and Wales. The focus has been on explaining the Airports Commission process and the Mayor's role, while canvassing their views and seeking to understand their key issues and concerns.

In addition two series of regional events were organised; the attendees and key themes are set out below.

In 2013, TfL held a number of regional stakeholder events to discuss the importance and potential impact of the airport expansion debate on regional economies. These were held in Bristol, Durham, Manchester and Stafford and attended by senior representatives from the following organisations:

Association of North East Council
Birmingham Airport
BSA Machine Tools Ltd.
Calderdale MBC
Cheshire East Council
Cognito
Craven District Council
Doncaster Metropolitan Borough Council
Durham County Council
Durham Tees Valley Airport Consultative Committee
Greater Manchester Chambers of Commerce
Hull City Council
Leeds City Council
Liverpool Vision
Manchester Airports Group
Newcastle International Airport
North Staffordshire Chamber of Commerce
North Warwickshire Borough Council
Northenden Diamond travel/C&W LEP
South Derbyshire District Council
Stockton Borough Council
Stoke on Trent and Staffordshire LEP
Stoke on Trent City Council
Stone Interim Management Ltd
Strategic Aviation Special Interest Group of the Local Government Association
Tees Valley Unlimited
Tyne and Wear Local Transport Plan Team

These meetings highlighted several important themes including:

» The extent to which regional economies need access to the London and global markets

» The sharp decline in connectivity to the UK's hub airport since 1990

» The extent to which regional businesses now use regional flights to European hubs to access global markets

In July 2014 The Smith Institute, in conjunction with TfL, hosted five regional dinners to debate regional connectivity within the context of DP06. These were held in Darlington, Glasgow, Inverness, Liverpool and Newquay and attended by senior representatives from:

Biggart Baillie
Cornwall Chamber of Commerce
Cornwall Council
Darlington Borough Council
Federation of Small Businesses: Highlands & Islands, North East
Glasgow Airport
Glasgow Chamber of Commerce
Highlands & Islands Airport
Inverness Airport Consultative Committee
Knowsley Chamber of Commerce
Liverpool and Sefton Chambers of Commerce
Liverpool John Lennon Airport
Liverpool ONE
Newcastle University
Newquay Airport
Peel Airports
Plymouth University
Real Results Marketing
Scottish Council for Development and Industry
Sefton Council
Strathclyde Partnership for Transport
Tees Valley Unlimited
The Big Partnership
The Highland Council
The Highlands and Islands Transport Partnership
Tomatin
Transport Scotland
A leading regional airline

Common themes included:

» Hub connectivity is crucial to support exports and regional growth especially in peripheral regions

» Frustration that the Airports Commission seemingly was giving little or belated focus to the need for better regional connectivity

» A broad agreement that there was no clear regulatory mechanism by which regional slots could be protected at the UK's hub

» A determination to secure European hub connections to by-pass London if necessary

» A London capacity solution was required beyond 2030

Endnotes

[1] "Heathrow launches task force on national connectivity", Heathrow Airport (press release), 24 July 2014

[2] "Gatwick chief eyes airline alliance move", Financial Times, 22 September 2013

[3] "The World According to GaWC 2012", Globalization and World Cities (GaWC) Study Group and Network

[4] "Airports Commission Discussion Paper 04 – Airport Operational Models: The Mayor of London's response", TfL, July 2013; "Airports Commission Discussion Paper 04 – Airport Operational Models: The Mayor of London's response, the Evidence Base", TfL, July 2013

[5] "Making Connections: Improving the UK's Domestic Aviation Connectivity with a New Four Runway Hub Airport", York Aviation in conjunction with Oxford Economics, June 2014

[6] Ibid, Page 5

[7] Ibid, Page 9

[8] Ibid, Page 10

[9] This analysis does not focus on 'self connecting' (where two tickets are bought separately and the transfer is self-arranged); this places the responsibility on the passenger for transferring baggage and making new arrangements and as such is of very limited appeal to the majority of passengers, particularly business travellers and those on longhaul journeys.

[10] "Airports Commission Discussion Paper 04 – Airport Operational Models: The Mayor of London's response", TfL, July 2013; "Airports Commission Discussion Paper 04 – Airport Operational Models: The Mayor of London's response, the Evidence Base", TfL, July 2013

[11] "Airports Commission Discussion Paper 04 – Airport Operational Models: The Mayor of London's response", TfL, July 2013

[12] "CAA Passenger Survey Report 2012", Table 1