

Auxiliary Evidence

**Review of Bristol International Airport's Reports
concerning
The Devolution of Air Passenger Duty to the Welsh
Government**



Llywodraeth Cymru
Welsh Government

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1. INTRODUCTION

1.1. In parallel with our own re-based¹ (to 2015) and independent studies of the potential impact of APD (Air Passenger Duty) being devolved in Wales, we have reviewed two consultancy reports commissioned by Bristol International Airport (BIA), and published in 2016, entitled *The Impact Of Devolving Air Passenger Duty To Wales – A Fair Flight* and its sister report looking at devolved long haul APD that examined the same issue.

1.2. These latter reports were commissioned by Bristol International Airport and submitted to the UK Government in 2015 in response to its consultation on the options for supporting English regional airports from the impacts of air passenger duty devolution and are referenced by HMT in its summary of submissions received^{2,3}. Subsequent to this consultation and in a statement to the House of Commons on 12 September, Guto Bebb, the Parliamentary Under-Secretary of State for Wales said:

*“..... the government did not intend to devolve APD to the Welsh Assembly, as doing so could have **caused significant market distortions in what is effectively a single aviation market in South Wales and South West England. As English and Welsh customers use both airports interchangeably, this could have caused negative consequences for both sets of customers***⁴.”

1.3. Given the possible influence of these reports, we have reviewed their analysis and conclusions and consider that there are a number of weaknesses and errors that need to be addressed:

- The idea that there “... *is effectively a single aviation market in South Wales and South West England*”, which clearly provides the underpinning rationale to the view that was reached, is fundamentally mistaken.
- “*English and Welsh customers use the airports interchangeably*” – is misleading and an over-simplification;
- devolving APD might cause “*significant market distortions*” – based on the evidence we have compiled we cannot envisage the circumstances in which this is likely to be true; and that
- there would be “*negative consequences for both sets of customers*” – our analysis does not support this. This appears to undervalue the rationale and apparent benefits that the WG has identified for its citizens in seeking to

¹ Using the latest 2015 CAA Survey data and forecast years of 2018 (assumed to be the earliest devolution of APD in Wales could commence) and forecast years of 2025 and 2040.

² HM Treasury: [*Discussion paper on options for supporting English regional airports from the impacts of air passenger duty devolution \(2015\)*](#)

³ HM Treasury: [*Options for supporting English regional airports from the impacts of air passenger duty devolution: summary of responses \(2015\)*](#)

⁴ Consultant’s highlights.

devolve APD. Our analysis indicates we also maintain that a long haul service, if based out of Cardiff will be of benefit to both parts of the combined long haul catchment area.

- 1.4. Moreover, the conclusions reached have not been examined against the guidance offered by relevant EU state aid regulations⁵, which identify key metrics that can be used to determine whether there is the potential for adverse effects on competition to arise as a result of such aid, and in neither case (i.e. the distance or travel time between airports), does the spatial disposition of Bristol and Cardiff Airports (CWL) give rise to such concerns.
- 1.5. The possible exception to the conclusion that Bristol and Cardiff Airports are not close enough geographically to justify the claim they share the same catchment area, is in relation to long haul routes; where catchment areas for such services tend to be rather larger than those for domestic or short haul services. Moreover, it is also clear that to sustain a discrete 'regional' market for scheduled and charter routes across the Atlantic and to the Middle East and reduce the dependence of South Wales and the South West of England on Heathrow and Gatwick, there needs to be a catchment area with sufficient demand within an acceptable travel time. The 90-minute drive-time isochrones from both airports certainly fulfil this criterion, but only as a result of a material catchment overlap, and that makes the competitive dimension of the impact APD may have on this market sector potentially more commercially sensitive.
- 1.6. Our work for the Welsh Government suggests that whilst the demand that might be captured regionally, may only support services to some long haul destinations from one airport or another, equally, there are other routes where there is scope for some measure of duplication. (E.g. a year-round and seasonal scheduled East Coast USA, two seasonal Canadian routes (one low cost scheduled, the other charter), two Middle East hubs served 6x daily by two separate carriers.) Unlike Bristol Airport's consultants, we are of the view that in addition to the choice of airport, APD, or commercial variables such as prospective load factors, yields, airport charges and incentives, will be the:
 - The shadow effect of the long haul network density and frequency offered by Heathrow (and to a lesser extent Gatwick);
 - The size of aircraft that potential airline operators use relative to the market available regionally; and
 - The operational parameters (particularly runway length) of the two airports, and any associated payload penalties;
- 1.7. The purpose of this paper is to review the robustness of the evidence contained within the two consultancy reports on which the UK Government based its

⁵ Guidelines on State aid to airports and airlines 2014/C 99/03

decision not to devolve APD to Wales. Those reports considered: first, the potential impacts on passenger volumes: and second, the implied damage to the South West's economy. Following our review, we consider that neither stands-up to close scrutiny.

1.8. This report establishes that the South West of England and South and south west Wales does not represent *a single aviation market* where demand for air travel can be conceptualised as a cake divided between two airports based on the ticket price (fares and taxes) charged to customers and the landing and handling charges levied from airlines.

- The wider region is subject to a complex interplay of catchments (including Cardiff and Bristol, but also includes Birmingham and London Heathrow, (and to a lesser extent) Luton, Stansted and London Gatwick) and can therefore not be compared to a binary star system with a single common centre of gravity as the Bristol catchment reports have modelled it. The most recent CAA passenger surveys, demonstrates that the great majority of traffic using Cardiff airport comes from within Wales.
- Differences in approach about assessing catchment areas have major impacts in the subsequent demand analysis that the Bristol report sets out. The Bristol report's analysis using 90 minute drivetime isochrones (when the industry standards used for domestic and short haul European traffic are typically 45 and 60 minutes) greatly exaggerates the extent of overlap between catchments.
- Bristol and Cardiff Airports have two distinct catchments rather than one consolidated one.
- The reports reviewed contain an implicit assumption that traffic from Wales is 'naturally' Bristol's, which demonstrably, is not the case. The thesis that because Bristol is currently the bigger airport it should have priority for future route development within what it regards as "its" catchment. For all the concern expressed about the anti-competitive effects of devolved APD, there must be recognition that competition is a two-way street.
- All other factors being neutral, Welsh originating traffic would prefer to ideally use their own airport which would help to sustain a better route network from Cardiff.
- The current skewed market is not justified by underlying demographic and economic profiles.
- The current market only serves to maintain existing allocative inefficiency.
- Current dispositions create substantive economic disbenefits for the Welsh economy. The GVA, that the Bristol airport reports estimate would be lost from the South West on this basis is overestimated, but even if true, would

not result in economic activity being lost across the UK. Instead, much would simply be transferred back to Wales, thereby correcting the current market distortion.

- The WG study focused on how flights that could serve the local Welsh catchment (where it is economically optimal to do so) might be attracted, rather than on enticing traffic from England across the Severn.
- The possible exception to these conclusions is for long haul routes, where we accept there is a market for a number of scheduled and charter routes across the Atlantic and to the Middle East. However it should not be accepted that all of these routes will go to one airport or the other; nor accept that there is not scope for some measure of duplication. Nonetheless there is evidence to suggest Cardiff is the better long haul airport for Wales and the South West.

1.9. In the November 2016 HMT report “Options for supporting English regional airports from the impacts of air passenger duty devolution: Summary of Responses”, the Government committed to review its stance on these matters (as set out in para 1.9 of the HMT report). There, the Government sought further views on the options with any further evidence on the likely impact of the options on airlines, airports, passenger numbers and growth – both in specific regions and across the UK as a whole. In para 3.8, HMT signals that the Government will continue to work closely with local stakeholders to discuss any further relevant evidence or analysis. HMT remains conscious that measures Government could legally put in place to support regional airports that are affected by devolution. In particular, HMT stressed it is important that the Government takes into account the precise nature of the legal settlement for leaving the European Union. The recently completed, Welsh Government commissioned, report (Devolution of APD to Wales) and this supporting Addendum is offered as fresh, and very pertinent, evidence to inform the debate.

2. DO BRISTOL AND CARDIFF AIRPORTS SHARE THE SAME CATCHMENT AREA?

2.1. The map that Bristol Airport's consultants used to underpin their view that Bristol and Cardiff Airports share the same catchment area, is shown in Figure 1 below (Figure 1.1 from their report):

Figure 1: Catchment Estimates in Bristol Airport's Consultants Report

Figure 1.1: 90-minute Drive Time Zones for Bristol and Cardiff Airports



Source: Microsoft MapPoint.

2.2. Whilst it would be possible to quibble about the detailed shape of the isochrones (which appear to have been substantially simplified), of greater significance is that the map is based on two fundamental, but debateable assumptions and one important omission, notably that:

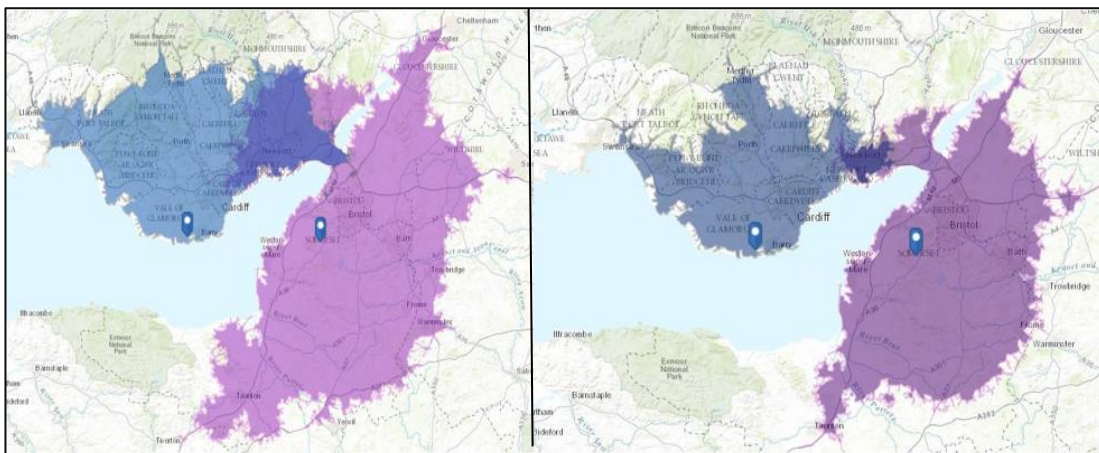
- Ninety minutes is the right travel time for determining the catchment boundary of each airport given predominant traffic types and standard industry criteria associated with them, when in fact it is not. The times most typically used in airline analysis of catchment areas for domestic and short haul European traffic are typically 45 and 60 minutes respectively. The effect of the 90-minute isochrones shown in Figure 1 is therefore to greatly exaggerate the extent of overlap between catchments, when in reality the Severn, or the banks of the Severn on the Welsh side of the Border are more realistic core catchment areas (as will be demonstrated below).
- The catchment area ascribed to Cardiff Airport is as limited as shown, ignoring the fact that it is the closest airport to South West and West Wales, which therefore naturally fall into its orbit extending its catchment substantially; the

implications of this are discussed further below. Similarly in the case of Powys, the consultants have not recognised that travel times to Birmingham, Bristol and Heathrow are all greater than to Cardiff and that consequently this county also falls naturally into Cardiff Airport's legitimate catchment area, especially as the rail service to Cardiff from this part of Wales is as fast, if not faster than access by road.

- c. There is no recognition of the crucial shadow effect of Heathrow, which limits the extent of uncontested catchment that Bristol has to the East, even for short haul services.

2.3. The catchment maps that are included in Figure 2, which have been prepared using the latest Geographical Information Systems (GIS) software, in our view, give a far more detailed and accurate overview of the 60-minute drive-time catchment areas for the two airports. The first in free flow off-peak conditions, the latter in peak period traffic conditions adding 10 minutes to the average travel time.

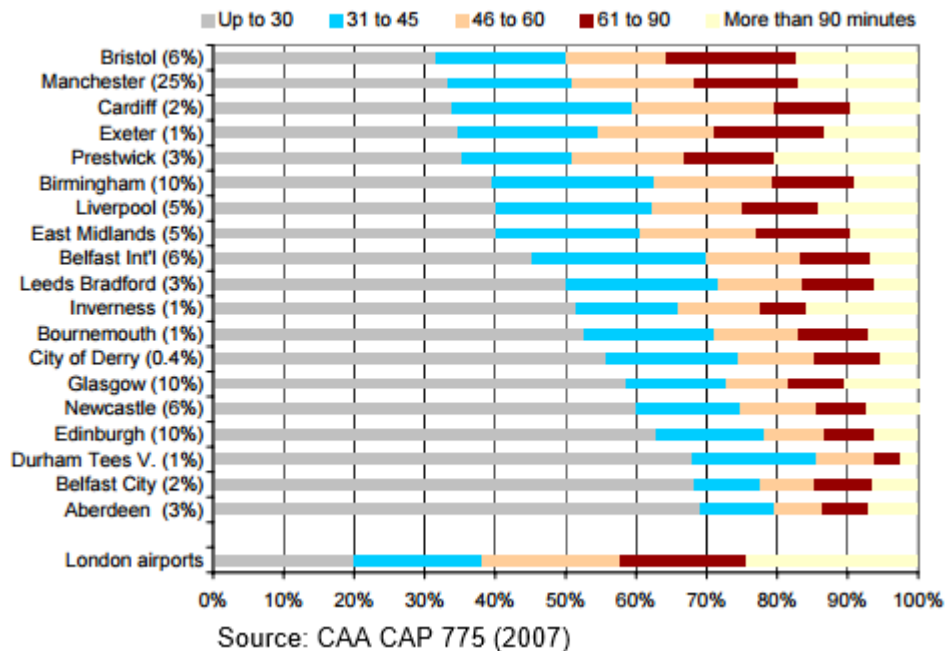
Figure 2: 60 Minute Drive-time Catchment Areas in free flowing (left) and peak period traffic conditions (right) with the catchment overlap almost eliminated



2.4. Given the stress levels that sections of the M4, A470 and A48, and key junctions onto those corridors are under, and the fact that for business travellers at least one of those legs is likely to be in the rush hour or congested conditions engendering the need for a safety margin to be built into the journey to the airport, we consider the right-hand of the two maps in Figure 2 the most prudent. The position in relation to public transport access is even clearer, as transfers and transit links from both city centres are required to access each airport, making this a materially slower alternative. None of these important local/sub regional factors were examined in any detail in the catchment areas used in Bristol Airport submissions.

2.5. Figure 3 below, from a November 2007 CAA report⁶ that uses CAA survey data from 2003–2006⁷ is informative for this discussion (Figure 6.4 from their report).

FIGURE 3: SURFACE ACCESS TRAVEL TIMES TO UK AIRPORTS



2.6. The first thing to note is that the London airports draw far more of their traffic from further away than regional airports that are characterised by passengers making considerably shorter journeys on average to access them - in other words, regional airports typically have smaller catchments with median surface travel times of between 45-60 minutes. In the case of Bristol just over 35% of passengers are from more than 60 minutes away, and many of these will be from the far South West of England because of its larger relative population, and not from Wales. It is also notable that only 20% of travellers are taking more than 60 minutes to reach Cardiff Airport, remembering that some of these will be travelling from West and West Central Wales where they have no other airport option. This evidence supports the inferences taken from Figure 2, that the extent of overlap between Cardiff and Bristol airports is small in percentage terms and is supported by EU state aid guidance on regional airports that defines competing catchments as arising where airports are less than 100km or 60 minutes travel time apart. Cardiff and Bristol are 99.4km and 1h 25 minutes apart (increasing to circa 1hr 40 minutes when allowing for rush hour traffic).

2.7. In addition, it would seem an unreasonable assumption to make in relation to modelled travel behaviours, that air passengers from South West and West Central Wales and the significant metropolitan areas of South Wales should be 'expected' to drive past a perfectly serviceable airport at Cardiff, to access

⁶ CAP 775 Air Services at UK Regional Airports - An Update on Developments

⁷ Because regional airports are not surveyed continuously, survey data in this comparison may come from different years and therefore may not be directly comparable. No survey data was available for Southampton, Doncaster Sheffield or Norwich.

another airport a substantial distance away (i.e. Bristol) with all the additional costs, loss of productivity and inherent environmental un-sustainability that this would imply. Consequently, any market assessment that is based on the opinion that Welsh and English passengers can be expected to use the two airports interchangeably is clearly unreasonable. It would also unjustly favour any analysis of exaggerating competitive effects from the reduction of APD in Wales.

Establishing Defensible Catchment Parameters for Analysis Rather than Adopt an Artificial Status Quo

- 2.8. Stepping away from the particulars of the Cardiff/Bristol situation, and looking strategically at the use of catchment analysis, Copenhagen Economics work for IATA, which is summarised in its *Economics Briefing No. 11* on Airport Competition published in 2013, argues that isochrones are a simple and arbitrary metric and therefore do not adequately capture all passenger preferences or behaviours. In their view, this means that there may not be a standard airport catchment area, and that the relevant metrics in a particular case may vary depending on site specific circumstances reflecting a range of local factors. Indeed, the suggestion is that the appropriate catchment areas to be used in the analysis of prevailing air travel markets may even vary for different types of route from a given airport (e.g. short- or long-haul routes, or for different types of passengers, such as business or leisure).
- 2.9. This points to a much more sophisticated approach being required to derive realistic airport catchments and understand how the impact of different commercial decisions and external interventions / actions will influence competition between neighbouring airports, than is offered in the Bristol Airport reports.
- 2.10. An alternative starting point for any analysis of airport catchments in the South Western part of the UK would therefore be to recognise that the current way in which demand for domestic and short-haul international air services in the region is being met, does not reflect underlying fundamentals. Rather, it is the result of a prolonged period of under-performance at Cardiff between 2005-13, while the airport was in private ownership, resulting in an under-developed route network, and consequently very high levels of leakage to the next nearest airport that can currently satisfy that demand, namely Bristol. In other words, the existing market position can be viewed as a short to medium term distortion based on historic factors that no longer exist. And although it suits the commercial interests of the benefitting party (i.e. Bristol), it does not represent an efficient allocation of resources. Hence any intervention – whether it be by discounting levels of APD or offering other forms of route support – is in fact doing little more than addressing that market failure by helping to secure a more economically rational outcome, having regard to the distribution of population and economic activity between South Wales and the South West of England.

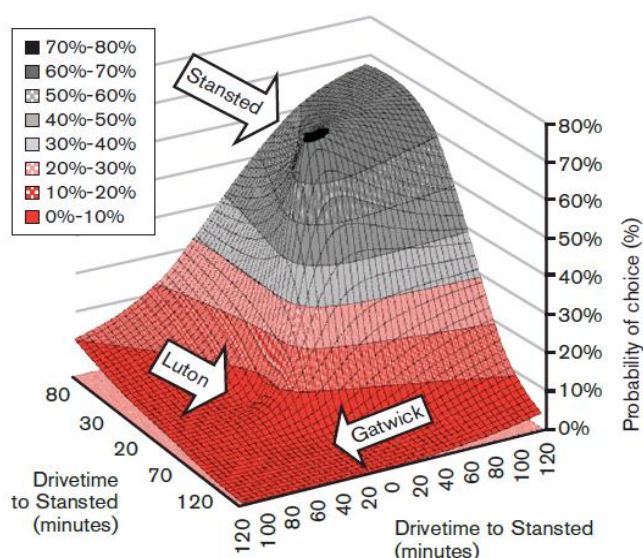
- 2.11. Put simply, at a micro (i.e. individual passenger) level, rather than macro level, air travellers in South Wales should not be expected to travel an extra hour to Bristol to access air services, if the underlying demand within Wales is sufficient to sustain them at an airport located closer to them at Rhosgoch. The position presented by Bristol is economically sub optimal, having regards to the infrastructure needs of the wider region, and the desirability nationally, of reducing current capacity pressures on Heathrow.

Passengers' Preference for Using their Local Airport

- 2.12. Of particular relevance to our deliberations, is analysis undertaken by Frontier Economics⁸ using real booking data (including the post codes of passengers), on behalf of easyJet. This found that passengers' preference for travelling from their local airport is very strong. The results are illustrated in Figure 4.
- 2.13. They found that for every 1% increase in distance, the likelihood of a passenger flying from that airport declines on average by 4%. In terms of price, the research found that, on average, for every 1% increase in distance, a 1% change in relative prices would be needed to persuade passengers to travel to the more distant airport.

⁸ Frontier applied to the likelihood of passengers using Stansted as opposed to the alternative London airports of Gatwick or Luton, for a range of popular destinations. This more sophisticated analysis shows quite clearly that as drivetime to the alternative airport approaches 120-minutes, the probability of passengers using these airports falls close to zero. In contrast, isochrones would present these airports as equally valid competitors to Stansted. This, alongside other evidence in the study, led them to emphasise that there is "*considerable evidence that passengers prefer to use their local airport.*"

Figure 4: Probability of using alternative airports based on travel time Source: Frontier Economics



2.14. In the context of these findings and given that nearly all of South Wales is closer in terms of travel time to Cardiff than Bristol, then the current disposition of the 4 million air passenger journeys annually that have an origin in Wales, of which Cardiff caters for 1.4 million, Bristol 1.1 million (with the rest fulfilled mainly via Manchester and the London airports) makes little rational sense. Even allowing for leakage to airports such as Heathrow and Gatwick, where a much wider range of services and attractive levels of frequency are available, then the attraction to Welsh originating passengers of Cardiff Airport offering a wider range of business and leisure destinations at enhanced frequencies, must be substantial.

2.15. This would suggest that a more appropriate distribution of these passengers requires a material repatriation of current leakage that the present situation should adopt as a baseline status quo, against which any assessment of competitive impacts should be modelled.

The Bristol Report's South West Wales Blind Spot

2.16. Bristol Airport's submissions to the HMT consultation appear to completely ignore the need to provide access to air services to the three West Wales counties of Carmarthenshire, Pembrokeshire and Ceredigion ⁹, which have a combined population of 381,900 (see Table 1), along with the provision of services for travellers from the south of Powys (population of Brecon and Radnorshire 65,000).

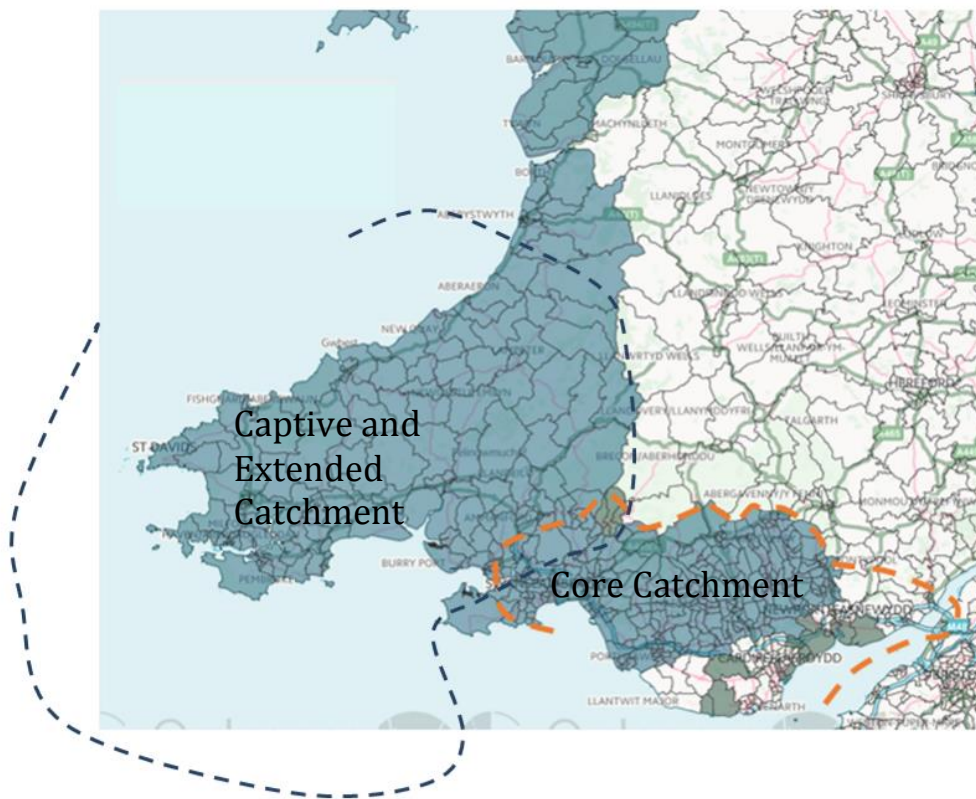
⁹ Nomenclature of Territorial Units Codes for Statistics for the United Kingdom

Table 1: County Populations in south west Wales

Carmarthenshire	184,000
Pembrokeshire	122,600
Ceredigion	75,300
Total Population	381,900

2.17. Taken together, this large rural area has a collective population of close to 450,000 - many of which are within Cardiff Airport's extended catchment (see Figure 5), in the sense that there is no other realistic alternative airport option. As such, this moves the relative centre of gravity of Cardiff's catchment area further to the West and away from that of Bristol, helping to further minimise the scale of overlap.

Figure 5: Cardiff Airport Core and Extended Catchment Areas



3. OTHER AREAS OF CONCERN

The Bristol Airport Modelling Methodology

- 3.1. For the purpose of their submission, Bristol Airport's consultants developed a simple gravity model to assess how changes in air fares at Cardiff brought about by changes in APD, including full devolution and the direct long-haul scenario, might affect the distribution of demand between the two airports.
- 3.2. The BRS report model used an unspecified '*attraction factor*' based on observed fares charged at both airports for domestic, Band A and Band B plus destinations taken from the 2012 CAA Passenger Survey and a further unexplained '*weighting*' to reflect the current relative attractiveness of the two airports, rather than the underlying distribution of demand across the wider South Wales/South West region. This methodological attribution is designed to freeze the current anachronistic supply side patterns within the baseline of any future projections, rather than recognise (as outlined earlier) that core fundamentals such as population distribution, the location of economic activity and on the ground drive times would normally be expected to assign Welsh traffic O&D traffic more even-handedly than currently happens. Notwithstanding that local demand density on the English side of the Severn Estuary would naturally support a wider range of services at higher frequencies from Bristol than Cardiff.
- 3.3. The Bristol Airport reports indicate that “ *...the distance decay factor within the model is determined by the travel time between the relevant airport and the surface origin or destination district for the passenger*”, with the level of demand within each district having been determined using 2012 CAA Passenger Survey data updated by undisclosed statistics and information from Bristol Airport. Given the concerns we have identified earlier about the catchment assumptions used in the Bristol report, the lack of transparency about the nature of the weightings and 'attraction factors' used to calibrate the model, and its reliance on data from before Cardiff airport was bought from Abertis, (a period when it was at its worst), we can have no confidence in what is effectively a 'black box' that has not been subject to detailed scrutiny or peer review.
- 3.4. The way in which it is reported that the model has then been used in the scenario appraisal, gives further cause for concern. The core five scenarios used to assess the impact of changes to APD on baseline demand forecasts are plausible, but then reference is made to a sensitivity test that represents a potential '*high case*' impact on Bristol. This sensitivity test apparently increased the price elasticity of passengers and hence the stimulation ascribed to Cardiff Airport following the relevant reduction in APD in traffic forecasts generated by the model. The Bristol Report also speculates that a further independent effect of a reduction of APD in Wales, would be for a low fares airline to base additional aircraft at the airport resulting in a significant 'one-off' jump in passenger numbers and a large percentage increase in throughput. This is also used as a premise to justify an

artificial calibration of the model to reflect a position in which short-term growth at Cardiff significantly outstrips that which might be suggested by the long-term elasticity. This was actually done by increasing the sensitivity to price in the model, such that the initial impact at Cardiff is approximately equal to three new low fares based aircraft.

The Plausibility of the Results Claimed by the Bristol Airport Studies

3.5. Despite the absence of any evidence to support the use of these outlier modelling assumptions, Bristol Airport suggests that considerable weight should be given to these High Case results - the effects of which can be seen in the summary of the passenger traffic and economic impact results below, with the two high impact scenarios producing results that are a factor of 2-3 times greater than their more prudent core equivalents:

GVA losses at Bristol Airport between 2014 and 2025 using a standard HMT discount rate of 3.5%:

• 50% Reduction	-	£170 million;
• 100% Reduction	-	£353 million;
• High Impact 50% Reduction	-	£448 million;
• Long Haul 100% Reduction	-	£190 million.
• High impact 100% Reduction	-	£843 million;

3.6. By 2015 (assuming 2014 as the baseline year and 2015 as the first year of an assumed change in APD), the impact on traffic volumes at Cardiff is projected to range from around 0.1 million passengers per annum (mppa) in the “50% Reduction” scenario to around 0.4 million mppa in the High Impact 100% Reduction” scenario. It is suggested this represents the equivalent of a ‘loss’ of between 1.5% and 6.2% of Base Case traffic at Bristol, although it is not clear whether the forecast increases are as a result of the underlying stimulation of demand in Wales or, as is inferred, the transfer of traffic currently using Bristol to Cardiff. The latter is highly implausible for a variety of reasons, not least the current very low levels of market penetration of South West of England originating passengers by Cardiff (c0.3%) and the additional costs those making the journey across the Severn to Rhooose would incur.

3.7. By 2020, the low end impact is projected to have grown to 0.2 mppa (2.7%) in the 50% Reduction scenario, and 1.0 mppa (15.7%) in the High Impact 100% reduction scenario. These figures are even less credible as the evidence of benchmarking from other countries where changes to passenger duties have been changed or contemplated in that the impact is short lived typically 1-2 years before a new long term equilibrium is established. But as the 2025 analysis that is reported demonstrates, Bristol’s consultants have not capped the differential directly attributable to changes in APD, but have instead continued to grow it as

the market as a whole grows, exaggerating the effects still further with bookend scenario outcomes of 0.2 mppa to 1.2 mppa.

- 3.8. On this basis, Bristol Airport concluded that if APD is devolved across all bands, and if the Welsh Government chooses to either abolish or substantially reduce the tax, this would potentially make travel via airports in Wales cheaper, and with all other things being equal, potentially more attractive to passengers than nearby airports where the tax remains as currently, such as Bristol. We disagree both with the validity of Bristol Airport's modelling outputs and this core resultant premise.

Other Questionable Assumptions

- 3.9. An important assumption that is apparently built into the modelling is that airlines will pass the APD discount provided in full onto passengers. This seems very unlikely and was a point of dispute between two studies on APD in Northern Ireland. Research undertaken as part of the NICEP study¹⁰ asserted that airlines would, to varying degrees, initially keep a share of any reduction in APD, and that over time, competition would force them to pass the reduction through to passengers. Based on a "consultation with the airlines" Bristol Airport's consultants¹¹ assumed that 50% of any change in APD would be retained by airlines in the first year after the change, 25% would be retained in the second year. By the third year they assume that all the impact of the change in APD would be passed on to passengers. While this assumption may seem reasonable, no evidence is provided to support the assumption. We consider that a range of alternative assumptions would be equally reasonable and could be justified in the model.

- 3.10. A recent study¹² for instance, reveals consumers paying higher air fares at congested airports, which Airports Council International (ACI) asserts, has implications for airport regulation. If airlines are pricing on the basis of what passengers are prepared to pay (as the report demonstrates), rather than on a cost-basis, then lower airport charges will not result in lower air fares – instead any savings will go straight into airlines' back pockets. The Bristol Airport Study considers the impact on the South West, which rather misses the point about the positive and negative impacts on South Wales.

- 3.11. The Bristol Airport Study considers that a level playing field in airport competition already exists, which this study robustly challenges (e.g. para 4.16). However the convenience of passengers and consumers should be the main focus of state aid concerns and not the relative convenience of market actors like airports. Commenting on the European Commission's recently launched

¹⁰ Air Connectivity in Northern Ireland: The economic impact of changes to air fares and short-haul Air Passenger Duty A Research Paper Final Dec 2014 University of Ulster and Critique of that report by Mott MacDonald - April 2015

¹¹ Northern Ireland Centre for Economic Policy (NICEP) worked with York Aviation on their report

¹² The impact of airport capacity constraints on air fares - SEO Amsterdam Economics & Cranfield University Jan 2017

evaluation of the EU Airport Charges Directive, Augustin de Romanet, President of ACI Europe and President & CEO of Groupe ADP said:

“Ultimately, what this shows is that what may be good for airlines - like lower airport charges - is not always good for passengers. Along with the rise of airport competition, this calls for a significant reset of the regulatory mindset – Europe needs to move towards a more passenger-focused and market-based approach to the regulation of its aviation sector.”

- 3.12. The notion that the nature of competition between airlines and airports is not at all the same was explored further by IATA in 2013¹³. They, for example, acknowledged assessment techniques that can be used to assess market power directly. One commonly used approach is the SSNIP¹⁴ test which is used to assess whether or not it would be profitable for an airport to increase its charges by a small but significant amount, say 10%. In a competitive market, an airport that raised prices in this way would be expected to lose a large amount of traffic and revenue. Therefore, where an airport would be able to increase profits in this way, this is seen as an indication that the airport possesses market power. Indeed, this report cited a judgment on the merger between U.S. Airways and American Airlines, where the US Department for Justice recognised that air travel is a derived demand and that passengers are not footloose:

“Passengers seek to depart from airports close to where they live and work, and arrive at airports close to their intended destinations. Most airline travel is related to business, family events, and vacations. Thus, most passengers book flights with their origins and destinations predetermined. Few passengers who wish to fly from one city to another would switch to flights between other cities in response to a small but significant and non-transitory fare increase”.

The Severn Bridge Toll and M4 Congestion

- 3.13. The toll charges apply to both the M48 Severn Bridge and the M4 Second Severn Crossing. The charges are only levied westbound, and are currently £6.70 for vehicles up to 9-seaters. At peak times this payment point can become the source of delays and adds another level of uncertainty to cross-Severn journey times.
- 3.14. The Bristol study did not factor the effect of this cost, and the demand elasticity associated with it, into its assessment of future passenger projections under different options. The removal of the tolls as recently announced will remove this effect.
- 3.15. Also material in this regard, is the consensus that exists, that additional capacity is required to cope with peak period traffic congestion on the M4 around Newport for three main reasons:

¹³ IATA Economics Briefing No 11 on Airport Competition

¹⁴ Small but Significant Non-transitory Increase in Price

- a. The Brynglas Tunnels on the M4 directly to the north of Newport are an acute pinch-point, reducing a six-lane motorway to four lanes. There have been many instances when there have been closures due to traffic incidents at this spot. For instance, in July 2011 the M4 was closed for two days after a lorry caught fire in the Brynglas tunnels. Nearby structures - the Usk Bridge to the east of the Tunnels and the canal bridge to the west - accentuate the difficulty of any road-widening project.
 - b. There were shortcomings in the original design of the Newport northern by-pass / northern distributor road, later linked in to the M4, including the lack of a hard shoulder for some of its length. This reduces its capacity for current traffic volumes.
 - c. The M4 is used by local traffic as a local distributor road for short journeys within the local urban area.
- 3.16. Consequently, potential air passengers using this stretch of road are likely to make allowance for additional journey time delays and uncertainty in estimating realistic travel times to Cardiff or Bristol Airports. These have been approximated in this report's analysis, and accentuate the preference for passengers in south Wales to use their local airport rather than Bristol when the destination they are seeking is served with adequate frequency.

4. CONCLUSIONS

4.1. This report examines various aspects of the issues at hand and concludes that the evidence provided by York Aviation and Bristol Airport is flawed and should not be relied upon. Our conclusions are expanded upon beneath this summary table:-

Theme	Report Conclusions
Catchments	South West of England and South and south west Wales does <u>not</u> represent a <i>single aviation market</i> .
	Bristol and Cardiff Airports have two distinct catchments rather than one consolidated one.
	The wider region is subject to a complex interplay of catchments (including Cardiff and Bristol, but also includes Birmingham and London Heathrow, (and to a lesser extent) Luton, Stansted and London Gatwick) and can therefore not be compared to a binary star system with a single common centre of gravity as the Bristol catchment reports have modelled it.
	The most recent CAA passenger surveys (the Bristol reports had access only to 2012 data), demonstrates that the great majority of traffic using Cardiff airport comes from within Wales.
	The analysis using 90 minute drivetime isochrones (when the industry standards used for domestic and short haul European traffic are typically 45 and 60 minutes) greatly exaggerates the extent of overlap between catchments, when in reality the Severn, or the banks of the Severn on the Welsh side of the border are more realistic core catchment areas.
	Differences in approach about assessing catchment areas have major impacts in the subsequent demand analysis that the Bristol report sets out.
	All other factors being neutral, Welsh originating traffic would prefer to ideally use their own airport which would help to sustain a better route network from Cardiff.
Assumptions	It suits Bristol Airport to argue that the catchments of the two areas are similar because that implies material competitive effects would arise from any devolution of APD.
	The thesis that because Bristol is currently the bigger airport it should have priority for future route development within what it regards as "its" catchment. For all the concern expressed about the anti-competitive effects of devolved APD, there must be recognition that competition is a two-way street.
Long Haul	The possible exception to this conclusion is long haul routes, where we accept there is a market for a number of scheduled and charter routes across the Atlantic and to the Middle East. However it should not be accepted that all of these routes will go to one airport or the other; nor accept that there is not scope for some measure of duplication.
	Indeed there is evidence to suggest Cardiff is the better long haul airport for Wales and the South West.
Devolution Rationale	Cardiff Airport is much more advantageous for Welsh business usage, but it also delivers benefits to incoming and outgoing leisure passengers.
	The Welsh Government understandably regards it as fundamentally important to ensure that the market conditions are right to achieve economic and trade goals by increasing international connectivity from within Wales rather than rely on less convenient external suppliers mainly in the form of airports at Bristol, Heathrow and Birmingham.
	APD currently amounts to a disincentive to the start of long haul routes from regional airports. Its removal or moderation would ensure carriers have a better chance of operating commercially. This is particularly important in the case of Cardiff, because whereas passengers living in Bristol, Bath and Swindon have the accessible alternative of travelling to Heathrow, for those in South Wales that choice is not nearly as convenient.
GVA Impact	The GVA, that the Bristol airport reports estimate would be lost from the South West on this basis is overestimated, but even if true, would not result in economic activity being lost across the UK. Instead, much would simply be transferred back to Wales, thereby correcting the current market distortion.
	The WG study focus has been on attracting services to serve the local Welsh catchment where it is economically optimal to do so, and not to attract traffic from England across the Severn.

4.2. This report establishes that the South West of England and South and south west Wales do not represent a *single aviation market* where demand for air travel can be conceptualised as a cake divided between two airports, based on the ticket price (fares and taxes) charged to customers, and the landing and handling charges levied from airlines. The reports reviewed contain an implicit assumption

that traffic from Wales is 'naturally' Bristol's, which demonstrably, is not the case. Indeed to maintain the current skewed market between Cardiff and Bristol bears little relation to that which is justified by underlying demographic and economic profiles, and only serves to maintain existing allocative inefficiency, which in turn creates substantive economic dis-benefits for the Welsh economy.

- 4.3. The fundamental premise that underpins this perspective, which in effect views the current status quo which is commercially optimal for Bristol Airport, is the recognition that Bristol and Cardiff Airports have two distinct catchments rather than one consolidated one. The main reason there is currently significant leakage of passengers to Bristol is because Cardiff has historically been under-developed as an airport when it fundamentally has a stronger geographical offer for the Welsh catchment.
- 4.4. Cardiff Airport is much more advantageous for Welsh business usage, but it also delivers benefits to incoming and outgoing leisure passengers. Additionally, Cardiff airport is potentially more attractive to long haul carriers as it offers a longer runway and is further away from the Heathrow shadow effect that demonstrably has inhibited long haul development at Bristol that their own report documented. The recent announcement of the Cardiff- Doha route by Qatar Airlines is practical vindication of this view.
- 4.5. In the studies undertaken regarding the devolution of APD to Wales, the focus has been on attracting services to serve the local Welsh catchment where it is economically optimal to do so and not to attract traffic from England across the Severn.
- 4.6. The main report, to which this document is an Addendum, points out that the wider region is subject to a complex interplay of catchments (including Cardiff and Bristol, but also includes Birmingham and London Heathrow, (and to a lesser extent) Luton, Stansted and London Gatwick) and can therefore not be compared to a binary star system¹⁵ with a single common centre of gravity as the BRS catchment reports have modelled it.
- 4.7. Moreover, evidence from the most recent CAA passenger surveys (the Bristol reports had access only to 2012 data), demonstrates that the great majority of traffic using Cardiff airport comes from within Wales. Very little (around 0.3% of its total) traffic is drawn across the Severn to. Bristol does currently draw traffic from across the Severn, but much of it is from the Border area. In our view, the two airports have distinct catchments that overlap only for some kinds of route, most notably long haul services or secondary short haul international business centres where one airport or the other offers a destination, which the other does not.
- 4.8. The catchment areas used in York's analysis are for 90 minutes when the industry standards used for domestic and short haul European traffic are typically

¹⁵ A binary star system consists of two stars orbiting around their common barycenter. Systems of two or more stars are multiple star systems and much more complex in their interactions.

45 and 60 minutes. The effect of this drivetime isochrone selection is to greatly exaggerate the extent of overlap between catchments, when in reality the Severn, or the banks of the Severn on the Welsh side of the Border, are more realistic core catchment areas. The 90 minute drivetime catchment drawings in the Bristol report also fail to acknowledge the 375,000 – 440,000 people in South West Wales for whom Cardiff is the nearest significant airport. The importance of this is that it moves the centre of gravity of Cardiff's catchment much further to the west than Bristol acknowledges, again enhancing the extent of separation and the putative risk assigned to the attraction of traffic across the Severn arising from the reduction of APD.

4.9. Put simply, it suits Bristol Airport to argue that the catchments of the two areas are similar because that implies material competitive effects would arise from any devolution of APD. The reality is, the catchments are distinct and Cardiff Airport's ambition, and that of the Welsh Government, is that it develops its own service offering to better cater for Welsh passengers, too many of whom are being lost across the Severn (not just to BRS), when they would prefer, and it would be more environmentally sustainable for them, to fly from their own national airport.

4.10. Additionally, these fundamental differences in approach about assessing catchment areas have major impacts in the subsequent demand analysis that the Bristol report sets out. More distinct catchments weakens the case for the high impact scenarios they chart in the study, leaving the base case estimates, which even if we accept their figures, and we do not, project only modest levels of impact from devolution of APD and that's before the existence of the Severn Tolls are taken into account. By the report's own admittance, their selected methodology significantly inflates elasticities and imposes weightings that exaggerate the effects. All in all, the levels of impact suggested are well within the margins of error for future route forecasting. Therefore one does not need to accept that devolving APD will materially affect route viability or development at Bristol.

4.11. The possible exception to this conclusion is long haul routes, where we accept there is a market for a number of scheduled and charter routes across the Atlantic and to the Middle East. However it should not be accepted that all of these routes will go to one airport or the other; nor accept that there is not scope for some measure of duplication (e.g. a year round and seasonal scheduled East Coast USA, two seasonal Canadian routes (one low cost scheduled, the other charter), two Middle East hubs served 6x daily by – two separate carriers).

4.12. Notwithstanding which, there is evidence to suggest Cardiff is the better long haul hub airport for Wales and the South West, principally because of the significant operational constraints at Bristol (runway length, taxiway and apron capacity) along with the difficulty of accessing it by public transport and the shadow effect of Heathrow drawing traffic from the near South West down the M4 corridor. It should be borne in mind that Heathrow is only 90 minutes by train (soon to be even less) and 2 hours by road away from Bristol, whereas it is far

less accessible from Cardiff and the rest of West Wales, which Cardiff Airport with its 2,600m runway, is much better suited to serving.

- 4.13. Bristol had a US route which was supported by a route development funding package from the then South West RDA, but was not able to sustain it, principally because there were insufficient business passengers. The recently announced loss of Bristol's service to the US on WOW (via Reykjavik) is another case in point. This provides further evidence (Continental previously withdrew its service to New York for similar reasons) that Bristol Airport will struggle to support a transatlantic operation. Our analysis suggests this is not through a lack of demand, but as a result of competition from services at Heathrow, Gatwick and Birmingham (all of which are much closer to Bristol than Cardiff) and the reluctance of network carriers to dilute their London services by cannibalising traffic with a service from Bristol. It seems reasonable to conclude, therefore, that Cardiff, which is over an hour further away from this competition, is far more likely to attract (and sustain) a carrier offering a regional transatlantic service capturing Welsh and some South West originating demand, than Bristol.
- 4.14. The international nature of companies places significant importance on being able to connect with North American markets and those in the Middle East and beyond (India, South Asia, Australasia etc). The Welsh Government regards it as fundamentally important to its future economic strategy to be able to connect and therefore trade effectively with international markets, and wishes to ensure that the market conditions are right to achieve this within Wales rather than rely on less convenient external suppliers mainly in the form of airports at Bristol, Heathrow and Birmingham.
- 4.15. APD currently amounts to a central Government imposed disincentive to the start of long haul routes from regional airports. Its removal or moderation would ensure carriers can achieve the higher net yields that would enable regional long haul routes to have a better chance of operating commercially. This is particularly important in the case of Cardiff, because whereas passengers living in Bristol, Bath and Swindon have the accessible alternative of travelling to Heathrow, where route viability is far less likely to be impacted by APD, for those in South Wales that choice is not nearly as convenient.
- 4.16. In addition, it is unreasonable to regard Welsh originating passengers currently using Bristol Airport as, in some sense, part of the natural order. In terms of convenience and sustainability, and all other factors being neutral, Welsh originating traffic would prefer to ideally use their own airport which would help to sustain a better route network from Cardiff. As emphasised elsewhere, none of the plans for Cardiff Airport are founded on the capture of a significant amount of South West England originating traffic. Indeed, this is regarded as an extremely unlikely scenario, even if APD were fully removed.
- 4.17. The GVA, that the Bristol airport reports estimate would be lost from the South West on this basis is overestimated, but even if true, would not result in

economic activity being lost across the UK. Instead, much would simply be transferred back to Wales, thereby correcting the current market distortion by better reflecting its geographical origins and helping to boost an under-performing economy compared with one that is already out-performing the national average.

- 4.18. The Bristol report appears to be founded on the thesis that because Bristol is currently the bigger airport it should have priority for future route development within what it regards as “its” catchment. For all the concern expressed about the anti-competitive effects of devolved APD, there must be recognition that competition is a two-way street. Indeed, there is a strong argument that the uneven weight of regulatory burdens imposed by Government and its agencies on smaller airports has already distorted the market place in the UK strongly in favour of medium sized regional airports like Bristol, and against smaller ones like Cardiff. All that a modification of APD rates would do is help to level an already very uneven playing field.