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Air Services for Plymouth – A Summary by FjØri and Bickerdike Allen Partners

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In 2011 Plymouth City Council, after carrying out its own independent evaluation, agreed with leaseholder Sutton Harbour Holdings (SHH) that the airport had become financially unviable and the airport was closed in December of that year.

Introduction

Despite some reports to the contrary, SHH fully supports the principle that the people of Plymouth and its surrounding areas deserve access to affordable and reliable air services to a wide variety of destinations. However, after a number of years trying to develop such services at the former airport site, and shouldering the year-on-year operating losses, it became apparent that the airport was in a location that was simply too constrained to achieve the above objectives without significant public subsidy. The following commentary is the result of a further review by airport specialist consultants FjØri Limited and Bickerdike Allen Partners.

The Short Runway

When operational, Plymouth City Airport had the shortest declared runway length of any of the principal regional airports in the UK, and only just over half the paved length of that of Devon’s other airport at Exeter, under an hour away by road from Plymouth City centre. At approximately 1,100m paved length, the runway at Plymouth was simply not long enough to attract those airlines that are able to provide frequent and affordable low-cost services such as Ryanair, Jet 2 or easyjet. During the last 10 years the regional airline market has changed dramatically and consolidated into a small number of low cost carriers mostly operating larger jet aircraft such as the Boeing 737, which Plymouth City Airport could never accommodate.

Whilst some airlines operating smaller aircraft do exist, it is no coincidence that there are no UK regional airports, outside of the London Airport network, managing to achieve overall arriving and departing passenger numbers greater than 100,000 per annum with a runway length less than 1,800m length. Typical declared runway lengths are shown below:

Airport	Declared Distances (ref. National Air Traffic Services)	
	Max. Take-Off Distance Available (TODA)	Max. Landing Distance Available (LDA)
	Leeds/Bradford	3,169m
Newquay	3,044m	2,637m
Bristol	3,016m	1,938m
Exeter	2,657m	2,027m
Bournemouth	2,576m	1,970m
Newcastle	2,404m	2,209m
Southend	1,799m	1,604m
London City	1,385m	1,319m
Plymouth City	1,169m	1,045m

Plans for a precision instrument runway with take-off lengths greater than 1,199m length are simply not feasible at the former airport site, unless there was significant land acquisition probably necessitating compulsory purchase and demolition of many nearby houses and repositioning of the main Plymbridge Road in order to widen the runway strip.

To compound the physical constraints at the former Plymouth City Airport, the mandatory safety areas at the end of the runway would need to be lengthened to meet Civil Aviation Authority (CAA) requirements. If this was to occur, it would impact upon business premises which would need to be compulsorily purchased at significant cost to the public purse.

Alternatively, if the airport boundary was not extended the actual runway available for take-off and landing would have to be significantly reduced, restricting further the capacity and range of aircraft using the runway and ultimately therefore the range of destinations.

The Independent View

Since 2003 when Avia Solutions, working for the South West Regional Development Agency, independently reported that Plymouth City Airport was ultimately both physically and environmentally constrained and consideration should therefore be given to its closure, there have been further reports from successive consultants confirming that the former airport was a high investment risk and highly likely to fail due to inadequate runway length and airline demand.

The 2011 Berkeley Hanover report could not identify any operational models that would protect Plymouth City Council from further exposure to financial risks, and the only low risk option identified would not in fact provide meaningful air services to the people of Plymouth. Berkeley Hanover in their independent report also concluded that for all options *"the likelihood of commercial profitability is very low to non-existent"*.

Furthermore, the market which might exist for operators of small aircraft capable of operating out of the airport without public subsidy was independently evaluated by Plymouth City Council's specialist advisors Orien Advisors Limited. This study included discussions with 12 potential airlines and 17 potential airport operators and concluded that there were insufficient profitable routes that could be operated without public subsidy, and even then these presented "high implementation risks".

Unsustainably Low Demand Levels

In 2010, the last full year of operation, before the airport closed 128,603 scheduled passengers passed through the airport of which only 48,859 were revenue generating departing passengers. To put this into context, this was the second highest recorded passenger numbers at the airport after 157,933 passed through the airport in 2009. Despite this, these were unsustainably low passenger figures for a regional airport, and represented a 19% decline on figures from 2009. In addition the actual use of the former airport by local businesses has been very small as confirmed by the Berkeley Hanover company survey carried out on behalf of the Plymouth Chamber of Commerce and PCC in 2011.

By comparison, from CAA statistics, the passenger numbers using other airports in the region have been much higher:

Airport	Passenger Numbers (ref. CAA)		Regional Market Share (%)	
	2009	2010	2009	2010
Bristol	5,642,921	5,747,604	71.8	74.7
Bournemouth	870,754	751,331	11.1	9.8
Exeter	795,721	744,991	10.1	9.7
Newquay	386,870	320,194	4.9	4.2
Plymouth	157,933	128,603	2.0	1.7

Per head of local population in 2010 the number of scheduled passengers per year at Plymouth City Airport represented 0.50 per head of city population.

This is compared to a ratio of 6.33 at Exeter Airport and 13.42 at Bristol Airport. Whilst this is only an approximate indicator, it is quite evident that compared to the size of the base city population, for a regional airport Plymouth City Airport was very little used indeed even before the economic downturn.

Of course re-opening the airport is a far cry from establishing credible and affordable air services for the people of Plymouth. Some proposals by campaign groups appear to be of high risk to investors and ultimately both prolong the inevitable and detract from the need to develop a wider air services strategy and robust road and rail transport infrastructure for the people of Devon and Cornwall.

A New Airline – Repeating History?

Aspirations for a new airline based on available evidence are ultimately flawed, and will repeat history and ignore numerous independent reports on the matter. As has been established independently through Plymouth City Council's advisors, Air Southwest was in fact a loss making enterprise, underwritten by Sutton Harbour Holdings. Despite initial successes, poor passenger numbers soon became unsustainable.

An independent operator, Air Wales, attempted a similar route strategy from the former Plymouth City Airport but this airline ultimately ceased trading, citing "spiralling costs" and "aggressive competition" from larger low-cost airlines.

It is evident that the entry level costs to establish routes and connections to other principal airports from the former airport would again be prohibitive without public subsidy.

The Introduction of Passenger Jets

Much has been reported about possibly introducing passenger jets. Due to the location of the site in a 'congested' area as defined by the Air Navigation Order, there would be both safety and noise implications with passenger jet aircraft. In addition, considerable consultation with the CAA, Plymouth City Council's Public Protection Service and the Local Planning Authority would be required.

Why? Because any introduction of fast jet aircraft into Plymouth would require a careful review of the risks associated with such an operation. Whilst modern jet aircraft are statistically safer than older turboprops, if they overrun or undershoot the runway their area of destruction is notably larger. The resultant revised risk contours would very likely include Oakwood Primary School.

Some have suggested that the airport could be planned on the same basis as London City Airport. However, this is a misleading comparison as Plymouth City Airport is very different to London City Airport, which is in fact far less constrained than the former airport site, in terms of runway safeguarding, and takes advantage of CAA dispensations that would not be available to any new airport at Plymouth. Discussions with CAA in 2013 confirmed this position and conversations with London City Airport in 2014 have highlighted the challenges they faced in securing this dispensation even before CAA removed the option for new airports.

The Noise Implications of Passenger Jets

One local pressure group, Viable Plymouth Limited (VPL) has proposed a three-phased development involving two runway extensions which when both complete would allow larger aircraft, and in particular jet aircraft, to operate. It is understood that in moving from Phase 2 to Phase 3 of this proposal, the change in aircraft is principally from large turboprop aircraft, such as the Bombardier Q400 (formerly Dash 8-Q400), to regional jet aircraft such as the Embraer 170 and 190.

In order to carefully consider the effects of such a proposal, SHH engaged airport noise specialists Bickerdike Allen Partners. They have considered the potential effects and have recently reported that taking account of the noise performance of these aircraft types at similarly sized UK airports, it is evident that such turbojet aircraft proposed for Phase 3 will be noisier by around 4 dB on arrival and up to twice as loud, by around 10 dB, on departure than the Q400.

Given this increase in noise from the individual aircraft it follows that consideration of the airport under each phase of development, VPL Phases 1 to 3, finds increases in the noise exposure with each development. Taking the number of people exposed to the level Government guidance classes as the onset of 'significant community annoyance' this increases from around 700 under Phase 1, to around 1,000 under Phase 2, and to almost 6,000 under Phase 3.

With the airport fully developed, as VPL Phase 3, these 6,000 people represent almost 2,400 dwellings exposed to noise levels at or above the level Government guidance classes as the onset of significant community annoyance. Of these around 1,000 people in around 450 dwellings are exposed to a level of noise where the Government would expect airport

A primary school is also exposed to such a noise level. Government advice is to offer acoustic insulation to noise-sensitive buildings such as this school. The most exposed people, around 100 in approximately 40 dwellings, are predicted to be exposed to even higher levels of noise where the Government expects airport operators to offer households assistance with the costs of moving.

There are a number of challenges with extending the runway, aside from the ownership of the land. Firstly planning permission needs to be obtained which is potentially a time consuming and costly process, and secondly there is no guarantee permission will be obtained, particularly given the increasing noise impact associated with the development.

Subsidy and Investment

Any attempt to re-open the airport and provide commercially viable, affordable air services from the former airport site would in our view incur considerable start-up costs, run significant risk of failure and require public subsidy. All independent reports point towards a high risk of business failure for any new airport start-up and all reports conclude public subsidy will be necessary in order to support what will likely be loss-making routes.

However, local Government subsidy is not available. In October 2012 the leader of the City Council, Tudor Evans, stated that he "*endorsed the position of the previous Conservative administration that the airport would have to operate without public subsidy*".

With local Government subsidy excluded, there is also no prospect of central Government subsidy; both the Transport Minister Simon Burns and the Secretary of State for Transport Patrick McLoughlin MP have confirmed that there is no opportunity for central Government subsidy and that any transportation funding in the area would be prioritised towards rail services.

Nor is there any prospect of a subsidy from UK Government. Transport Minister Simon Burns told a delegation from Plymouth City Council in January 2013 that there wasn't demand for an airport in Plymouth and that people should use Exeter instead. He also ruled out any chance that the Government would nationalise the former airport site.

The Secretary of State sees investment in rail as a greater priority, stating in November 2013 that *"the loss of the airport may mean inter-city rail connections need to be improved"*, going on to say that *"We may have to look at providing better connections through rail"*.

Given that the three-stage strategy proposed by some campaign groups will require considerable funding at each stage, the consequent risk to the city is that any new start-up airport would once again make a loss. This would result in air connectivity stagnation without providing air travel services that are affordable and relevant to the ordinary travelling public.

The airport has already been established to be an unviable proposition for the City at this site and therefore it seems nonsensical to mothball it, or alternatively open it as a hobby airfield for the affluent. There are plenty of alternative airfields across Devon and Cornwall providing this service.

One potential route for either central Government or European Union funding might have been towards specific routes, using what is known as a Public Service Obligation, or PSO. However, the possibility for regional airport route protection into the principal London hub has been scotched by the Davies Commission interim report of December 2013. The proposal put to the Commission was to consider the possible use of Public Service Obligation to safeguard UK regional access to Heathrow to ensure the continuance of flights from UK regions into the principal hub. However, the Commission has not recommended this measure stating that *"the rules surrounding PSOs would not allow for this"*, and the Commission was *"unconvinced of the benefits of this measure"*.

The Effect of Closure

In some quarters there had been concern that previous users of the airport would be adversely affected. In fact it is evident that the effects have been minimal, with FOST re-establishing a base at HMS Raleigh.

Additionally, with the trauma centre designation, a new helipad at Derriford Hospital is being developed and is due to be operational in May 2014. The helipad will be able to accommodate air ambulances, coastguard and military aircraft. Being located immediately adjacent to the hospital, it will be an improvement on the previous situation where patients were transferred by land ambulance between the airfield and the trauma unit. Additionally the Devon Air Ambulance is successfully based at Exeter Airport.

Keeping Connected

Despite what some commentators report, air connectivity from within Devon is in fact good. Like many other cities in England, Plymouth is connected to the wider UK and Europe via road and rail links and also via a regional airport within its county. Exeter Airport is situated within Devon and presently advertises routes to over 40 destinations in 20 countries. This is in fact a very good level of local connectivity and Plymouth needs to embrace its nearby regional airport in order to realise its potential for the Plymouth area.

Not all cities have an active regional airport on their doorstep offering commercial passenger flights and indeed not all counties have such a regional airport within their boundaries at all, including for example Cumbria, Nottinghamshire, Kent, Buckinghamshire and Suffolk.

Plymouth's connectivity is also getting better. Notwithstanding recent weather related events, Plymouth has direct fast trains to London, and whilst the service generally needs upgrading, it is undeniably providing an affordable connection to the Capital and much of the line is now earmarked for heavy investment. An analysis of the original flight times from the former airport against the equivalent journey by train shows that when Air Southwest operated its necessary circuit via Newquay Airport, the overall journey time including check in was 185 minutes. The train times may vary, but it is evident that direct services that take 180 minutes are available demonstrating an almost equivalent journey time, with arguably better conditions for business travellers to work on the train.

The South West region is also the first in the UK to benefit from a ticketing strategy called Rail-Fly. Travellers from 11 destinations in the South West, including Plymouth, can now arrange their international flights and rail fares under one booking, following a partnership launched between Singapore Airlines, Heathrow Express and First Great Western in January 2014. This is the first 'through ticketing' of its kind in the UK.

The Future

What is needed is a greater level of engagement with Exeter Airport, recognising that it is Devon's principal regional airport, favoured by passengers.

Devon's regional airport actually represents Plymouth's best hope for sustainable levels of air services from the County. The sooner the two cities of Plymouth and Exeter work together on the matter of air service provision, the more secure the future of Devon's regional airport will become.

But whatever services Plymouth might seek to attract into a re-opened airport will likely default to Devon's regional airport as it has better infrastructure, longer runways (providing better scope for airlines on routes, passenger numbers and ticket pricing) and most importantly it has critical mass allowing airlines to reduce their risks on investment into that airport when compared to a new Plymouth City Airport start-up.

Some say it is vital that Plymouth has its own regional airport and that the city cannot rely on Devon's remaining commercial airport. In fact many cities in the UK do not have a regional airport within their immediate boundary and rely on sharing airports with neighbouring cities.

This includes for example Nottingham (nearest airport East Midlands), Swansea (nearest commercial airport at Cardiff), Ipswich (reliant on Stansted), York (with poor access to Leeds/Bradford) and Sheffield (with poor access to Doncaster).

Plymouth is certainly not the largest UK city without a commercial/regional airport; that is Sheffield whose airport closed in 2008. Sheffield's nearest regional airport is now in the Metropolitan Borough of Doncaster, trading as 'Doncaster-Sheffield Airport'; some 28 miles (44 minutes) from Sheffield city centre using poor roads. The distance between Plymouth and Devon's regional airport near Exeter is 48 miles (53 minutes) on good roads similar to that between the city of Swansea and Cardiff Airport.

Based on travel time alone, cities such as York, Swansea and Ipswich are all further from their nearest regional airport than is Plymouth. Typical travel times (by car) between cities and their nearest airports are shown below:

From	To	Miles	Time (mins)
Exeter	Exeter Airport	6	17
Bristol	Bristol Airport	8	20
Nottingham	East Midlands Airport	15	27
Cardiff	Cardiff Airport	15	31
Sheffield	Doncaster Airport	28	44
Plymouth	Exeter Airport	48	53
York	Leeds Bradford Airport	31	54
Ipswich	Stansted Airport	48	62
Swansea	Cardiff Airport	44	62

Source: Google Maps

Recent reporting has also cited the success of the city of York in pulling in more tourists by having more major tourist attractions.

What is interesting is that York does this without an airport within its city boundary but it does have an airport (Leeds/Bradford) within its county boundary (some 31 miles, or 54 minutes away by single carriageway roads). Plymouth too has potential and similarly has a nearby airport some 53 minutes away in Devon but with much better surface connections.

Plymouth therefore can rely upon Devon's regional airport at Exeter for access to air services within the County. It is well connected to Plymouth, the rest of the UK and Europe. With political willing and collaboration other cities manage this – why not Plymouth?