Response to review by Dr.Michael W.Tretheway of LECG report:

"Benefits and costs to the public of proposed Air NZ and Qantas Code share: Trans-Tasman services to Wellington"

Prepared for Wellington International Airport Limited

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22 September 2006

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1 Introduction

In April 2006, Qantas and Air New Zealand (the Applicants) applied for approval of a Tasman Networks Agreement (TNA) under section 88 of the Civil Aviation Act. Responsibility for the decision on this application has been delegated to Hon Pete Hodgson, Minister of Transport.

Wellington International Airport Limited (WIAL) submitted its views on the proposed TNA to the Ministry of Transport on 2 August. WIAL attached to its submission, a report I co-authored with Sally Barnes and Daniel Garrett, entitled, *"Benefits and costs to the public of proposed Air NZ and Qantas Code share: Trans-Tasman services to Wellington"*, dated July 2006.

Counsel for the Applicants asked Dr Michael Tretheway to respond on selected points in our report. Dr Tretheway refers to our report as "the LECG report".[1] Dr Tretheway's comments were submitted to the Ministry in a report dated 21 August and entitled *"Comments of Dr. Michael W.Tretheway: A response to LECG's report, "Benefits and costs to the public of proposed Air NZ and Qantas Code share: Trans-Tasman services to Wellington", dated July 2006*. Dr Tretheway also prepared for the Applicants a submission to the Australian Competition and Consumer Commission,[2] and testified before the New Zealand Commerce Commission in support of the Applicants proposed Alliance in 2003.[3] I refer to these documents in this response to Dr Tretheway's comments.

2 Flights to and from Wellington are a separate market

Dr Tretheway begins by asserting that "in section 3, they [our August report] claim that fares will rise by a *minimum* of 46%." (emphasis in Dr Tretheway's report) This assertion by Dr Tretheway is not correct. Our report does not state that prices will rise by 46% or that they will rise by a minimum of 46%.

Our report noted that airfares offered by Emirates for Auckland to Sydney flights (from Wellington) *were* on average 46% higher than airfares offered by Air New Zealand and Qantas for direct Wellington to Sydney flights over the period April 2006 to the end of June 2006.[4] We noted that airfares quoted by Pacific Blue for flights from Wellington to

[1] The views and opinions expressed in the report are those of the authors, not LECG.

[2] Report of Dr Michael Tretheway: Evidence on the impact of Market Structure on Average Air Fares in the trans-Tasman Market, 1999-2006. (Dr Tretheway ACCC submission)

[3] Transcript of Air NZ/Qantas Authorisation Conference, 18 August 2003.

[4] The Emirates fare included an assumed $102 fare from Wellington to Auckland, which was the average of the least cost fares offered by Qantas and Air New Zealand over the same period.

Sydney via Brisbane, *were* on average 39% higher than the fares offered by Qantas and Air New Zealand for direct flights between Wellington and Sydney.[5,6]

We made these observations to assess whether flying to Sydney via Auckland (with Emirates) or via Brisbane (with Pacific Blue) were economic substitutes to direct flights between Wellington and Sydney. Because the fares via either Auckland (with Emirates) or via Brisbane (with Pacific Blue) are so much higher than the fares offered by Qantas and Air New Zealand for direct Wellington to Sydney flights, passenger services across the Tasman to and from Wellington should be considered separate markets for the purposes of assessing the benefits and costs of the proposed TNA.

Our approach followed that of competition authorities worldwide. We assessed whether a hypothetical monopolist flying between Sydney and Wellington could profit from a *s*mall but *s*ignificant *n*on-transitory *i*ncrease in *p*rice (*ssnip*), before loosing customers to alternative routes. This so-called ssnip test is routinely applied by competition authorities in defining the relevant markets for the purposes of assessing mergers and arrangements. The New Zealand Commerce Commission, the Australian Competition and Consumer Commission, and the United States Department of Justice, for example, all use the ssnip test.

An observation that prices on alternative routes are currently 46% higher than fares offered for direct flights and hence those alternative routes are not economic substitutes is not a claim that the TNA would increase prices by 46%. Dr Tretheway's claim, repeated a number of times in his report, that "LECG puts forth different numbers for potential price increases under the Tasman Networks Agreement (TNA) at different places in the paper",[7] is simply wrong.

We conclude that "for those routes in and out of Wellington in which Air New Zealand and Qantas (jointly) achieve a monopoly under the TNA, prices could be expected to increase 19% (assuming Cournot competition as modelled by the Commission and linear demand)." [8]

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[5] In each case, the airfares are the lowest quoted four weeks from departure for flights at any time on a Wednesday, page 5 of our August report.

[6] Though these fares are graphed on page 5 of our report, and the Pacific Blue Wellington-Brisbane-Sydney flight is mentioned 6 times on pages 5 and 6 of our report, Dr Tretheway states that "they ignore the fact that Pacific Blue is already in the market and is already carrying passengers on indirect routes onto its Brisbane-Wellington route. For example, Pacific Blue carries Sydney-Wellington passengers via Brisbane."

[7] "*Comments of Dr. Michael W.Tretheway: A response to LECG's report, "Benefits and costs to the public of proposed Air NZ and Qantas Code share: Trans-Tasman services to Wellington", dated July 2006*, 21 August 2006, p.2. (Dr Tretheway comments)

[8] "*Benefits and costs to the public of proposed Air NZ and Qantas Code share: Trans-Tasman services to Wellington*", Prepared for Wellington International Airport Limited, LECG, July 2006, p31.

3 Price increases of 19%

Dr Tretheway says that:

> The hypothetical fare increases posited by LECG are untenable and not supported by any actual airline experience in the world.[9]

There are three difficulties with this statement. The first difficulty is that it is not correct as a statement of fact. In a widely cited article, Severin Borenstein analysed the merger between Northwest and Republic airlines in the mid 1980s.[10] He found that on routes in which the merging carriers had been the only two competitors, relative prices increased by 22.5%.

The study is important because it, and other studies, marked the end of a period under which airline mergers were governed (and not denied) by the Department of Transport.[11] The United States Federal Competition Authority, the Department of Justice, was subsequently granted jurisdiction. Since then the Department of Justice has generally opposed mergers that involve airlines that have network overlaps, which is where airlines operate on the same route.[12]

The US decision to allow competition authorities to review airline mergers (rather than rely on scrutiny by the Department of Transport) is relevant to the second difficulty with Dr Tretheway's comment. It may be the case that no recent airline merger has resulted in price increases of the order of 20%. Competition authorities in jurisdictions against which New Zealand commonly compares its policies, subject proposals for cooperation between airlines on the same route (such as is proposed by Qantas and Air New Zealand) to intense scrutiny.

The US Department of Justice generally opposes such alliances. The European Commission has been extremely concerned in cases where alliances or merger partners were the only competition on particular routes. The Commission has gone to considerable lengths to ensure actual entry of competition on routes likely to suffer from a large, or total, loss of competition.[13]

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[9] Comments of Dr Tretheway, paragraph 2.1.9.

[10] *Airline Mergers, Airport Dominance, and Market Power,* Severin Borenstein, American Economic Review, Vol. 80, No. 2, Papers and Proceedings of the Hundred and Second Annual Meeting of the American Economic Association (May, 1990), pp. 400-404.

[11] See for example, The Transport Research Body of the US Department of Transportation, Special Report 230, 1991.

[12] *Special Report 255: Entry and Competition in the U.S. Airline Industry, Issues and Opportunities.* Transportation Research Board, National Research Council, Washington D.C., supra note 11, at p 139.

[13] As stated by Stragier J, "EC Competition Policy in the Aviation Sector: State of Play and Outlook", paper presented at the Annual Conference of the Guild of European Business Travel

It is conceivable that no competition authority would allow such an arrangement as proposed between Air New Zealand and Qantas, and hence recent empirical evidence may not be available.[14] The New Zealand Commerce Commission rejected in 2003 an application by Qantas and Air New Zealand for an Alliance, concluding it would lead to net public detriments of about $155 million per annum.[15]

The third difficulty with Dr Tretheway's sweeping statement is that our estimate of price increases of the order of 19% is consistent with other estimates, including estimates by Dr Tretheway. The Commerce Commission estimated that Trans-Tasman prices would rise by 16%.[16] The Commerce Commission's modeling did not consider the Wellington-Tasman routes explicitly. The alliance between Air New Zealand and Qantas would create a cartel between the only two carriers currently flying these routes (except for Wellington-Brisbane, which is also flown by Pacific Blue), and hence the Wellington-Tasman routes would be subject to greater price pressure than other trans-Tasman routes.

In his submission to the ACCC, Dr Tretheway states that if the TNA were to operate on the Auckland to Melbourne route, Qantas and Air New Zealand would have a combined capacity of 80.7% (based on capacity share in April 2006).[17] Dr Tretheway's results suggest that this increase in concentration would increase average fares on this route by roughly 15%, if airfares are regressed against a concentration index (an approach Dr Tretheway does not favour). Dr Tretheway also estimates that a monopoly on trans-Tasman routes would raise prices by about 47%, relative to perfect competition.[18]

It would seem that Dr Tretheway's real criticism is not that our price estimates are unreasonable, were the TNA to create a cartel over air passenger services to and from Wellington. Rather, he takes the view that "statistical evidence does not support a finding that higher concentration leads to higher fares on trans-Tasman routes where a low cost carrier is present in the market."[19] That is, he takes the view that the trans-Tasman routes will remain competitive with the TNA, if a low cost carrier is present. Dr Tim Maloney,

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Agents (GEBTA), Lisbon, 22 March 2002, at p 3. Joos Stragier is the Head of Transport Unit, DG Competition, EC Commission.

[14] Professor Jerry Hausman, MIT testified to the New Zealand Commerce Commission that no anti-trust authority would allow the earlier Alliance proposed between Qantas and Air New Zealand because of the reduction in competition. Transcript of Air NZ/Qantas Authorisation Conference, 18 August 2003.

[15] This decision was subsequently upheld by the High Court, though it reduced estimated welfare detriments to $114 million per annum.

[16] Commerce Commission Determination No 511, of 23 October 2003.

[17] Report of Dr. Michael W Tretheway, Evidence of the Impact of Market Structure on Average Air Fares in the Trans-Tasman Market 1999 - 2006, Statement to ACCC Regarding TNA, 21 August 2006, at paragraph 5.6.8. ('ACCC submission')

[18] At paragraph 5.6.7 Dr Tretheway calculates that a monopoly could increase prices by $114.72 over the average air fare. At paragraph 5.7.6, Dr Tretheway says that the average fare in his data set is very close to $245.

[19] Dr Tretheway ACCC submission, paragraph 2.2.16.

Associate Professor and Deputy Head of the Economics Department at the University of Auckland, has identified some potentially important criticisms of Dr Tretheway's regression analysis that forms the basis of his claim that higher concentration levels would not lead to higher prices.[20]

A further difficulty with Dr Tretheway's position, is that he does not analyse the markets to and from Wellington, but implicitly assumes markets to and from Wellington will reflect any general findings regarding trans-Tasman services. For example, in his submission to the ACCC, Dr Tretheway concludes that Emirates has the short-term ability to expand its trans-Tasman capacity in terms of both flights, and especially in terms of seat capacity. Dr Tretheway says that the introduction of the A380 could be expected to add over 40% more seat capacity than existing aircraft.[21] However, Emirates told the Commerce Commission that flights to Wellington would not be an option for them due to the inability to fly large aircraft into Wellington,[22] and certainly the A380 could not land at Wellington. Dr Tretheway appears to extrapolate, wrongly, the competitive position for flights in and out of Auckland to flights in and out of a different market, Wellington.

Dr Tretheway also characterizes the agreement between the United Arab Emirates and New Zealand as providing "carriers of the UAE unlimited frequencies and capacity on trans-Trasman routes."[23] This is not correct. While the Memorandum of Understanding provides for no restriction on capacity, the UAE Air Services Agreement does outline principles governing that capacity. These principals include:

(a) That the "primary objectives" of the agreed capacity is that it relate to the requirements of the market between New Zealand and the UAE geographical area; and

(b) That in the operation of the agreed services by a designated airline of either Contracting Party, the interests of the designated airline of the other Contracting Party shall be taken into consideration so as not to affect unduly the agreed services which the latter operates on the whole or part of the same route.

The Ministry of Transport has written to Emirates encouraging the airline, in its future route planning, to bear in mind these principles and to do more to focus on travel between the Middle East and New Zealand.[24] The Ministry appears to be encouraging Emirates to focus on direct New Zealand to UAE flights, and discouraging Emirates from competing on trans-Tasman routes. The Ministry has reminded Emirates that it must have regard to Air New Zealand's interests. It would seem that Dr Tretheway was not

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[20] Review: Report of Dr. Michael W Tretheway, Evidence of the Impact of Market Structure on Average Air Fares in the Trans-Tasman Market 1999 - 2006, Statement to ACCC Regarding TNA, 21 August 2006, Dr Tim Maloney, 21 September 2006.

[21] Dr Tretheway ACCC submission, paragraph 9.3.7.

[22] Commerce Commission Determination No 511, paragraph 708.

[23] Dr Tretheway ACCC submission, paragraph 9.3.2.

[24] Letter from Mr John Bradbury, Acting Secretary for Transport, to Mr Sam Cooper, Chapman Tripp, 15 September 2005.

aware of these constraints on Emirates ability to compete when he wrote that Emirates "has no immediate regulatory barrier to expansion on trans-Tasman routes".[25]

[25] Dr Tretheway ACCC submission, paragraph 9.3.4.

4 Cournot modelling

In his response, Dr Tretheway is highly critical of Cournot modeling. He says that "Cournot modeling is based on a simplistic set of assumptions regarding behaviour of firms."[26] He adds that, "there are severe limitations as to what the present state of the art can modelling [sic] under Cournot type modeling exercises."[27]

Dr Tretheway appears to have firmed up his views in relation to Cournot modeling since he testified before the New Zealand Commerce Commission and was questioned by Commission Chair, Ms Paula Rebstock, in relation to the Applicants' Cournot model submitted in support of the Alliance. Dr Tretheway testified that:

> The characterisation of competition between FSAs, as being Cournot or capacity based, is consistent with the empirical evidence that I have read ... it's also consistent with my intuitive observation ... I believe that the extension of the - the development and growth of the global alliance is a good manifestation of that; you try and compete by, in some ways offering more and more capacity or access into the system.[28]

Ms Rebstock also asked Dr Tretheway about using Cornout assumptions to model competition between a VBA entrant and a full service airline. Dr Tretheway qualified his reply by stating that he was not a modeler, and commented:

> ... my view as a fundamental aspect of competition between them is the removal of price -- of the type of price discrimination that the FSAs had in the market. That fundamentally relocates the firms in the market at a different price point. At that point, however, they deploy capacity, and they continue to compete on capacity, and we see that in the low cost carriers throughout the world where they add capacity on a route and they will continue to add capacity as the extra flights continue to cover their fully allocated costs on the route ... my sort of kind of top of the hat sort of reflection is Cournot modelling seems to have some elements for, that that would be appropriate...[29]

When asked by Ms Rebstock whether Cournot modeling has "any elements that don't seem appropriate", Dr Tretheway did not identify any such elements.

We agree with Dr Tretheway's comments that there are limitations to Cournot modeling. The simplifying assumptions it requires severely limit the model's ability to replicate real-world outcomes. However, it is important to attempt to quantify likely detriments and likely public benefits, and in this regard:

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[26] Dr Tretheway comments, paragraph 2.5.4.

[27] Dr Tretheway comments, footnote 17.

[28] Commerce Commission conference transcript, page 170, 18 August 2003.

[29] Commerce Commission conference transcript, page 171-172, 18 August 2003

- The Applicants proposed a Cournot model to the Commission.
- The Commerce Commission, and subsequently the High Court, attempted to improve the approach to modeling aided by experts of international standing (though with mixed results).
- Dr Tretheway has proposed no alternative means of estimating the benefits and detriments.

5 Monopoly and competitive supply

Dr Tretheway opens section 2.3 of his response by stating that "LECG claims that existing load factors on the trans-Tasman are adequate and that the market is not oversupplied".[30] No such claims are made in the section referred to by Dr Tretheway, nor anywhere else in our paper. The word "adequate" is not contained in our paper. Nor do we imply anywhere that the load factors present in the market are adequate (or not). The only time the word "oversupplied" is used is in the reference to claims made by Air New Zealand and Qantas. Section 6.2 of our report simply provides data on existing spare capacity in the market for Air New Zealand, Qantas and other carriers. The section also compares utilization rates for trans Tasman and trunk routes.

In section 2.4, Dr Tretheway claims that "for LECG, withdrawal of capacity under the TNA *must* mean that in order to protect the same number of seats, fewer seats in total will be sold".[31] (emphasis in original) He repeats this claim several times in section 2.4. However, no such statement is made in our paper.

Our paper makes two simple points in relation to airline capacity. First, we observe and explain why 'spare capacity' is a feature of efficient and well working airline markets (and other markets in which demand is uncertain and capacity is fixed in advance of demand). We do not think this point is contentious. Dr Tretheway appears to agree with this point as he notes that "LECG are correct in their comment that an objective of seat management is to protect a certain number of seats for late booking, low fare elasticity traffic."[32] With uncertain demand, and fixed capacity (in at least the short term), there will always be times in which capacity is greater than demand for a particular flight on a particular day.

Second, we summarise and reference accepted economic theory that in industries in which demand is uncertain and capacity is fixed in advance, a monopolist would set higher prices (or, equivalently, allocate more seats to higher price levels) than would occur in a competitive market. The intuitive explanation is that a monopolist does not have to worry that a customer with a high willingness to pay might choose to fly with a competitor, if a cheaper fare is available.

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[30] Comments of Dr.Tretheway paragraph 2.3.1.

[31] Comments of Dr.Tretheway paragraph 2.4.3.

[32] Comments of Dr.Tretheway paragraph 2.4.3.

It is difficult to confidently summarise Dr Tretheway's response. He appears to make two points that are summarized in paragraph 2.4.9 of his paper:

(a) Under the TNA, the joint trans-Tasman operations of Air New Zealand and Qantas will be much larger than their current separate operations, which will enable each airline to more accurately forecast late booking demand and this will lead to reduced costs.

(b) Air New Zealand and Qantas will use this increased forecast accuracy to reduce the number of seats protected for late booking, low fare elasticity traffic. The seats freed up will be offered at lower fares.

The first point is a variant of the argument that competition is wasteful, and that the supply of goods and services, especially those services requiring fixed capacity, would be better met by a single supplier operating to a least cost model. The failure of the former Soviet Union economies, and the success in terms of consumer benefits from liberalizing airline markets, mean this argument has been thoroughly discredited. However, we expect Dr Tretheway did not intend to argue in favour of monopoly provision. Rather, we expect he wanted to make the point that forecasts are more accurate the larger the data set (economists sometimes refer to this as the law of large numbers). If that is the point Dr Tretheway wanted to make, it is uncontroversial. But it is not an argument in favour of allowing a cartel.

The second point made by Dr Tretheway in paragraph 2.4.9 is that the airlines will use their greater market power (because customers have little or no other choice than to fly with the cartel), to make additional lower priced fares available. This point is novel. It is not consistent with any accepted theory on monopoly pricing. Dr Tretheway does not explain why the shareholders of Qantas and Air New Zealand would allow management to give away value in this manner, even if management were inclined to do so.

6 Incentives on the cartel

In section 5 of our report, we noted that the under the TNA, Air New Zealand and Qantas will share revenue on trans-Tasman routes according to a pre-defined formula. However, the parties do not share costs. An arrangement in which the parties share revenue, but do not share costs, creates incentives for each party to reduce costs. The party reducing costs, say through reducing marketing or service levels, retains the full benefit of the cost reduction and looses only a part share of any consequential reduction in revenue. We illustrate these incentive effects with some highly stylized examples.

Dr Tretheway says (correctly) that these stylized examples are unrealistic. They were not intended to be realistic, but to illustrate the incentive effects created by the TNA. As we note in our paper, the Applicants have not released details of their revenue sharing arrangements, and hence the incentives cannot be modeled precisely.

We agree with Dr Tretheway's observation that the "applicants would be highly unlikely to allow a situation to develop where one carrier or the other was incurring costs which

were not balanced by revenues".[33] As the revenue allocation is fixed by a pre-defined formula, the variable available to the airlines to rectify this situation is to reduce costs. Hence, the arrangements appear to create a 'race to minimum quality'.

7 Threat of new entry

In section 7 of our report, we noted that the Commerce Commission and the High Court had found that an Alliance between Air New Zealand and Qantas on the trans-Tasman routes would raise entry barriers. The High Court found that:

> The predictable competitive response of the incumbents would be to increase capacity and reduce price on those routes [i.e., the routes subject to new entry]. This conveys to the entrant the likely conditions of expansion while permitting the incumbent to maintain prices on other routes. The Commission argues, in our view with logical force, that the proposed alliance has stronger incentives to respond to entry in this way because it reaps the benefits if it succeeds in delaying or deterring entry on other routes on which it has a higher and, as yet, uncontested market share.[34]

Dr Tretheway appears to struggle with the concept that airlines might increase capacity and reduce airfares on one route (to deter entry), while maintaining or increasing prices on routes on which they retain market power. He asks "how can this [expanding capacity and lowering fares on one route] be reconciled with their claims of 19% or 46% price increases?"[35]

The concept that airlines dominant across a number of routes will use that market power to deter entry is well established in anti-trust decisions, as evident by the Commerce Commission's decision and the High Court finding that the Commission argues on this point with "logical force". The concept is also well established in the literature.

One explanation of Dr Tretheway's confusion on this point might be that he has to date not considered the trans-Tasman routes as separate markets of city pairs. He has presented his analysis in aggregate terms. This in itself is surprising as in his testimony to the New Zealand Commerce Commission Dr Tretheway commented that "traditionally when we look at competition in airline markets we've always looked at city pair market."[36] When pressed by the Commission Chair on whether taking a more aggregated approach would have the advantage of picking up the benefits of connectivity, Dr Tretheway agreed but added: "although I wouldn't look at it in aggregate in isolation, I think you would have to look at aggregate and in micro detail."[37]

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[33] Comments of Dr.Tretheway, paragraph 2.2.7

[34] Air NZ v Commerce Commission (No 6), para 115.

[35] Comments of Dr.Tretheway, paragraph 2.6.3.

[36] Commerce Commission conference transcript, page 172-173, 18 August 2003.

[37] Commerce Commission conference transcript, page 174, 18 August 2003.