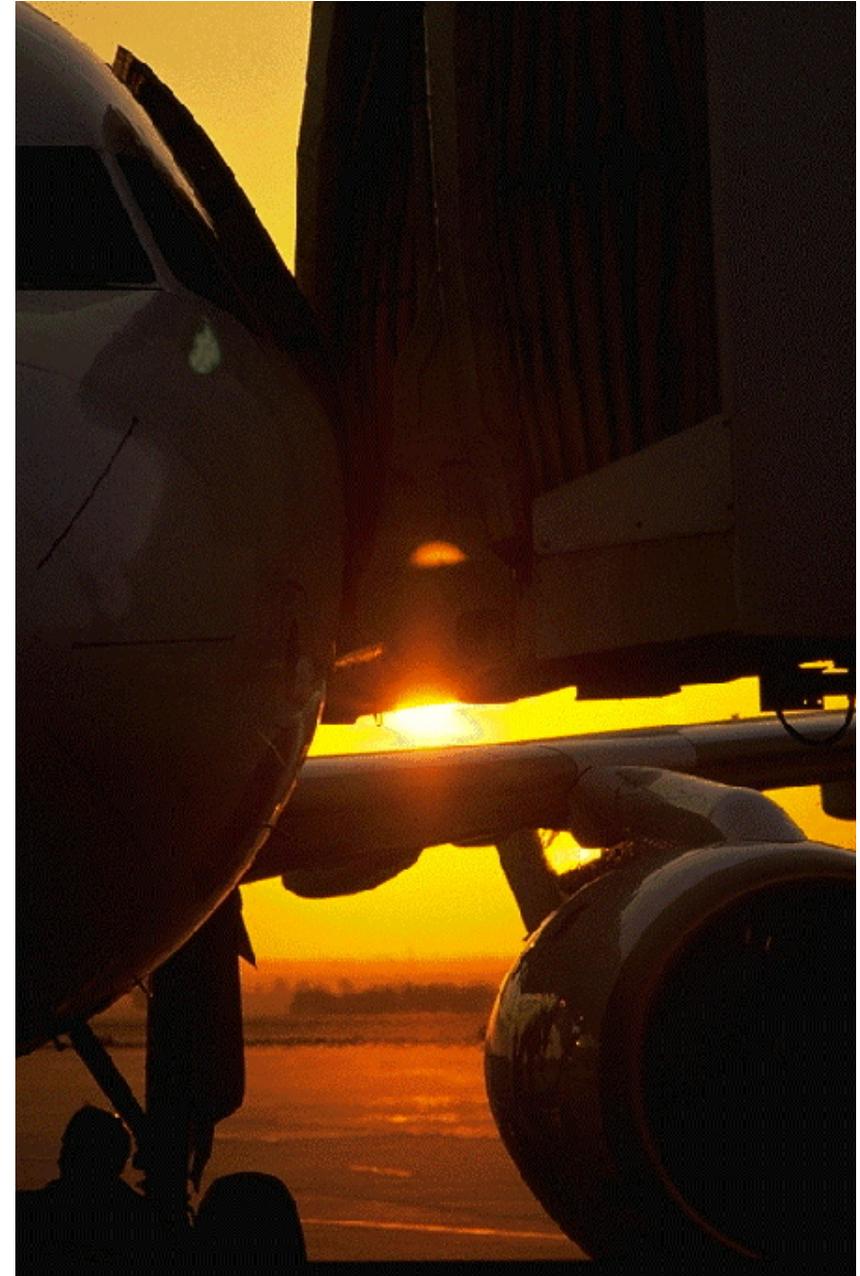


DOMESTIC TURNAROUND COST REVIEW  
REPORT



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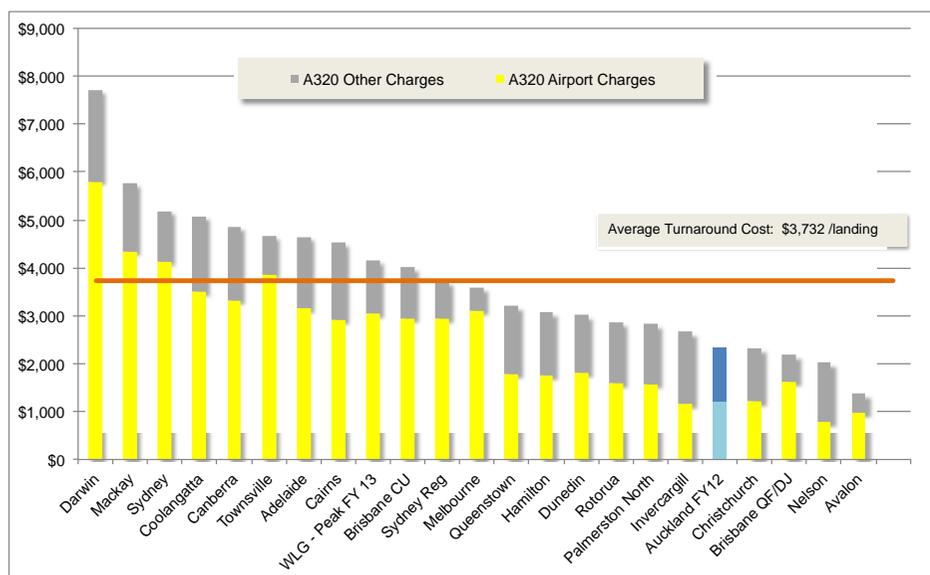
# Executive Summary

Airbiz has been commissioned by Auckland Airport to analyse turnaround costs for domestic services at New Zealand and Australian airports. Airbiz has undertaken the analysis of domestic turnaround costs for two common aircraft types at 10 New Zealand and 13 Australian airports, the A320 and the Q300.

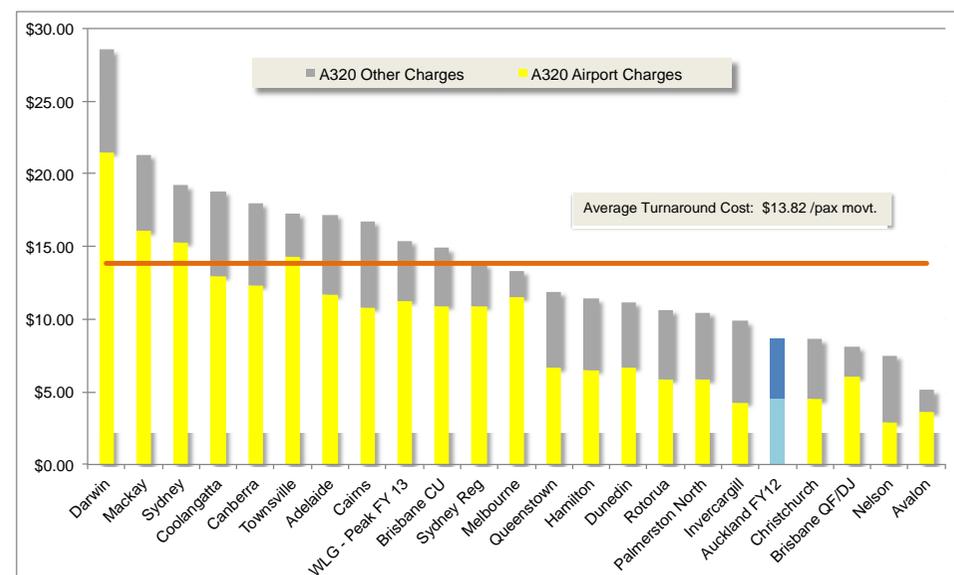
An airline's total turnaround costs may vary significantly from what an airport directly charges airlines for landing and terminal charges. This is because services provided by an airport in one instance may be provided by a third party at another airport. For example, Auckland Airport's airport charges include a fire rescue component, while in Australia this is commonly a third party charge. Therefore general references to "airport charges", may in fact be airport cost recoveries, third party costs or some combination of the two. To address this issue Airbiz has estimated total turnaround costs as the sum of the charges made by an airport plus the charges made by third parties, including Government agencies, for services such as terminal navigation, security and rescue fire.

Using this methodology Auckland Airport's turnaround costs for the A320 are the fifth lowest of the 23 airports surveyed and the third lowest of the New Zealand airports reviewed. Auckland Airport's total turnaround cost for the A320 was \$2,336 compared with a NZ airport sample average of \$2,649 and an overall average of \$3,732. This translates to a turnaround cost of \$8.65 for Auckland Airport per passenger movement (i.e. each way) compared to a sample average of \$13.82.

**Turnaround charges per plane**

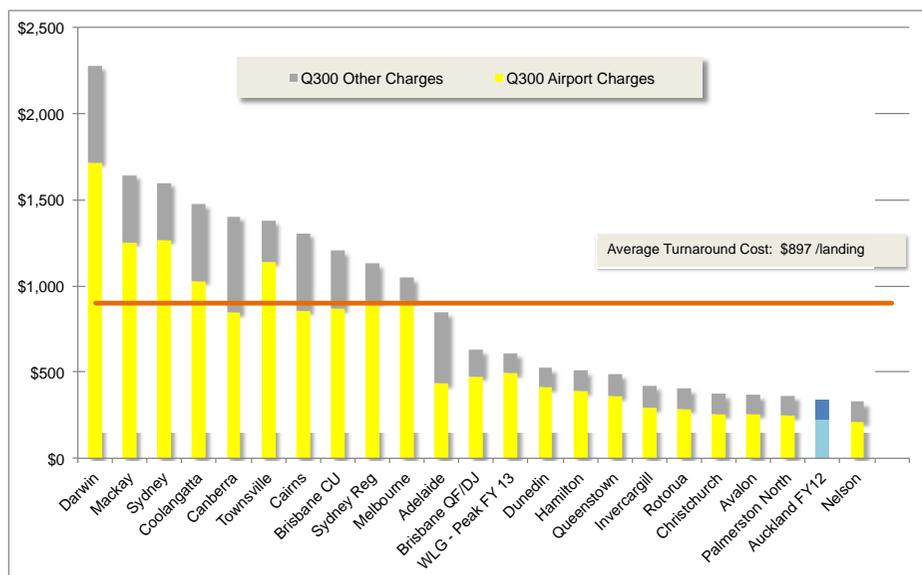


**Turnaround charges per passenger**

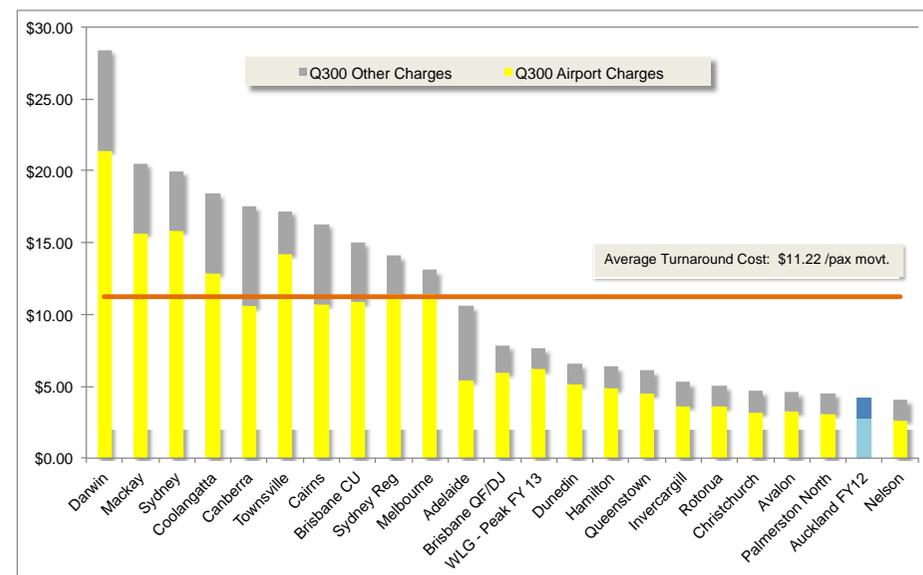


AIAL's turnaround costs for the Q300 are the second lowest of the 23 airports surveyed and the second lowest of the New Zealand airports surveyed. AIAL's total turnaround cost for a Q300 was \$337 (\$4.21 per passenger movement) compared to an average for surveyed New Zealand ports of \$369 (\$5.45 per passenger movement) and an overall survey average of \$897 per landing (\$11.22 per passenger movement).

Turnaround charges per plane



Turnaround charges per passenger



Third party charges, in particular terminal and aerodrome navigation make up a significant proportion of total domestic turn around costs. In general, third party costs for smaller turbo-prop aircraft are higher, as a proportion of total costs, than for larger jet aircraft. As well, third party costs, and in particular terminal navigation costs appear to be higher, as a proportion of total turnaround costs, at smaller regional ports than at larger ports.

# 1 Introduction

Airbiz has been commissioned by Auckland International Airport Limited (AIAL) to analyse turnaround costs for operators of regular passenger traffic (RPT) domestic services at New Zealand and Australian airports. Airbiz has undertaken the analysis of domestic turnaround costs for two common aircraft types at 10 New Zealand and 13 Australian airports.

Section 2 of the report discusses the methodology used to calculate turnaround costs and Sections 3 and 4 summarise the Airbiz turnaround cost estimates.

# 2 Methodology

## 1.1 Turnaround costs versus landing charges

An airline's total turnaround costs can vary significantly from what an airport charges airlines for landing and terminal charges and the two measures are by no means the same thing. What are sometimes referred to as "airport charges" may in fact be airport cost recoveries, third party costs or some combination of the two. The underlying issues regarding the assessment of airport charges and turnaround costs include:

Whether the charges for services that are being compared are comparable or even similar in terms of scope or quality of service.

The nature of institutional relationships between airports and third party providers of services such as security, rescue fire, terminal navigation, and baggage handling vary considerably between airports and countries. In some situations airports provide, for example, terminal navigation, in others they do not and so on.

That some of the costs that are included in studies as "airport charges" are not in fact paid to the airport but rather are provided by and paid to third parties.

That charges for services provided by airports at some locations and by third parties at others, may be regarded as "airport charges" for reasons of consistency. This is despite the fact that airports have no control over the service level or the total costs associated with those services.

The total costs of landing at an airport are borne by passengers and airlines. These costs are generated by the airport, which provides infrastructure plus a range of other services, as well as third parties, including government agencies, which also provide services. To refer to what are, in fact, airline turnaround costs as "airport charges" is a misnomer.

## 1.2 Proposed approach

To address this Airbiz has assessed total turnaround costs as:

Landing charges

Aircraft parking charges

Passenger related charges including security

Terminal navigation charges.

However, Airbiz has then disaggregated these costs into those paid:

Directly to airports, and

Those paid either directly to third parties or collected on behalf of third parties by airports.

### 1.3 Included costs

In most cases airline turnaround costs are based on published rates for RPT services operating from these ports plus the published costs of security, rescue fire, terminal navigation and any other CAA or Airservices Australia charges.

In AIAL's case there is no explicit domestic terminal charge and the terminals are rented to airline customers. For the sake of comparison AIAL's turnaround costs include an effective terminal passenger charge for leases relating to common use.

Some airports published rates for itinerate aircraft but do not disclose the rates charged for regular passenger services. As the airports' itinerate rates may overstate the actual costs to a commercial operator, these airports have been excluded from the analysis.

### 1.4 Assumed aircraft configurations

Airbiz analysed the charges applying to two common aircraft types flying domestic services at AIAL.

TABLE 1 AIRCRAFT CONFIGURATIONS

Aircraft	ICAO Code	Seats	Pax	MTOW - tonnes
A320 – 200	A320	171	135	73.500
Bombardier - Q300	DH8C	50	40	19.506

In all cases a load factor of 79% was applied to the seat configuration to derive estimated passenger numbers.

### 1.5 Airports included in the study

The airports included in the part of this study comprise 10 main centre and regional New Zealand airports and 13 Australian ports.

TABLE 2 AIRPORTS INCLUDED IN THE STUDY

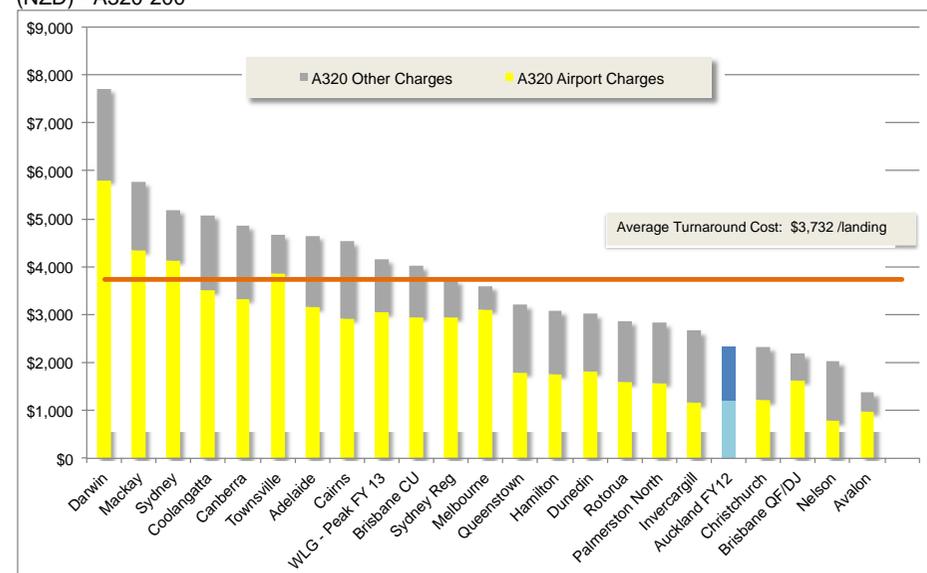
New Zealand	Australia
Auckland	Adelaide
Christchurch	Avalon
Dunedin	Brisbane: Common User
Hamilton	Brisbane QF/DJ
Invercargill	Cairns
Nelson	Canberra
Palmerston North	Coolangatta
Queenstown	Darwin
Rotorua	Mackay
Wellington	Melbourne
	Sydney
	Sydney Regional
	Townsville

# 3 Total turnaround cost

## 1.6 A320

AIAL's turnaround costs for the A320 are the fifth lowest of the 23 airports surveyed and the third lowest of the New Zealand airports reviewed. AIAL's total turnaround cost for the A320 was \$2,336 compared with a NZ airport sample average of \$2,649 and an overall average of \$3,732.

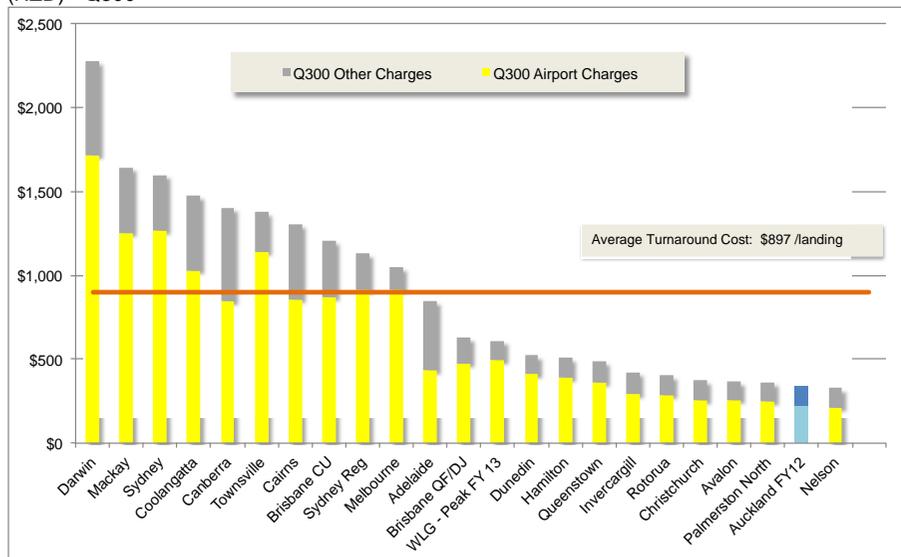
FIGURE 3-1 TOTAL DOMESTIC TURNAROUND COSTS (NZD) - A320-200



### 1.7 Q300

AIAL's turnaround costs for the Q300 are the second lowest of the 23 airports surveyed and the second lowest of the New Zealand airports surveyed. AIAL's total turnaround cost for a Q300 was \$337 compared to an average for surveyed New Zealand ports of \$369 and an overall survey average of \$897 per landing.

FIGURE 3-2 TOTAL DOMESTIC TURNAROUND COSTS (NZD) - Q300

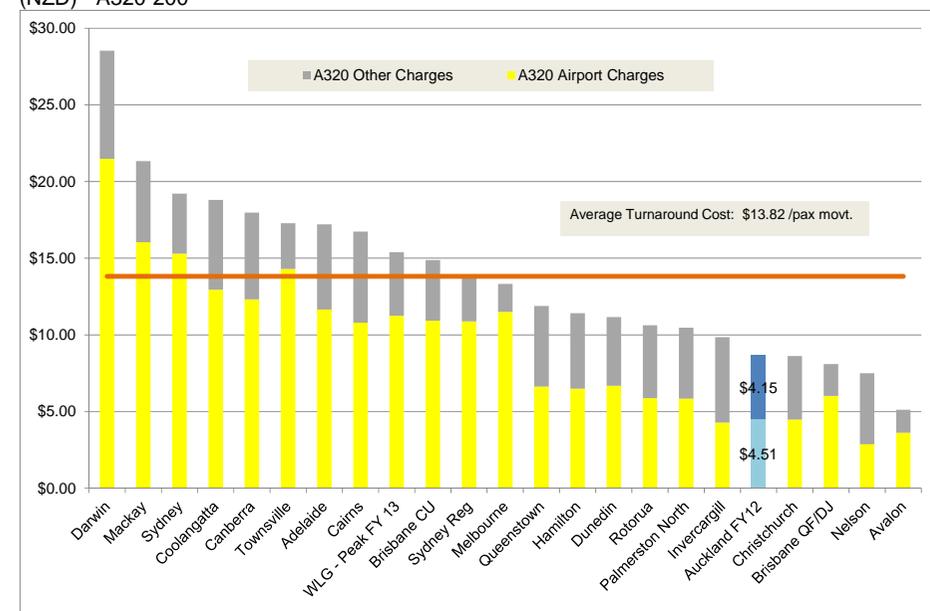


# 4 Turnaround cost per pax movement

## 1.8 A320

Auckland Airport's turnaround costs per passenger movement for the A320 are the fifth lowest of the 23 airports surveyed and the third lowest of the New Zealand airports reviewed. AIAL's turnaround cost per passenger movement for the A320 was \$8.65 compared with a NZ airport sample average of \$9.81 and an overall average of \$13.82. At Auckland Airport \$4.51 was directly charged by the airport and \$4.15 by third parties.

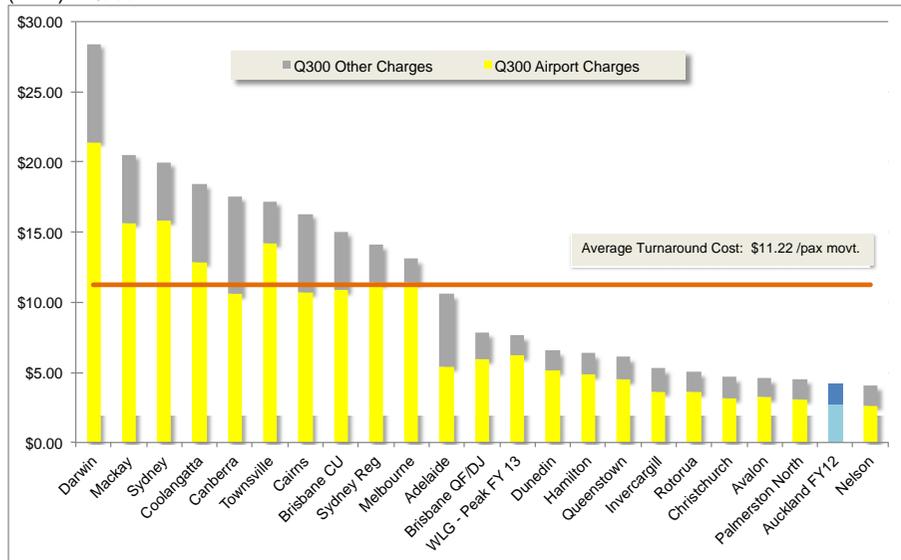
FIGURE 4-1 TOTAL DOMESTIC TURNAROUND COSTS (NZD) - A320-200



**1.9 Q300**

AIAL's turnaround costs per passenger movement for the Q300 are the second lowest of the 23 airports surveyed and the second lowest of the New Zealand airports surveyed. AIAL's turnaround cost per passenger movement for a Q300 was \$4.21 compared to an average for surveyed New Zealand ports of \$5.45 and an overall survey average of \$11.22. At Auckland Airport \$2.77 was directly charged by the airport and \$1.44 by third parties.

FIGURE 4-2 TOTAL DOMESTIC TURNAROUND COSTS (NZD) - Q300



# Appendices

### Appendix 1: Total Domestic Turnaround Costs by Aircraft Type (NZD)

	A320	Q300
Adelaide	\$4,646	\$847
<b>Auckland</b>	<b>\$2,336</b>	<b>\$337</b>
Avalon	\$1,383	\$367
Brisbane CU	\$4,018	\$1,204
Brisbane QF/DJ	\$2,189	\$629
Cairns	\$4,520	\$1,303
Canberra	\$4,855	\$1,401
Christchurch	\$2,330	\$374
Coolangatta	\$5,078	\$1,472
Darwin	\$7,706	\$2,272
Dunedin	\$3,015	\$523
Hamilton	\$3,082	\$508
Invercargill	\$2,662	\$423
Mackay	\$5,759	\$1,641
Melbourne	\$3,598	\$1,047
Nelson	\$2,026	\$328
Palmerston North	\$2,828	\$364
Queenstown	\$3,208	\$488
Rotorua	\$2,870	\$403
Sydney	\$5,187	\$1,597
Sydney Regional	\$3,723	\$1,128
Townsville	\$4,666	\$1,375
Wellington	\$4,157	\$611

**Appendix 2: Airbiz estimates of total domestic turnaround costs by component – A320-200**

	Total	Landing	Passenger	Aerobridge	Parking	Security	Screening	Dev't Charges	Rescue Fire	Terminal Navigation	Civil Aviation
Adelaide	\$4,646	\$1,454	\$1,520	-	-	\$494	-	-	\$172	\$1,006	-
<b>Auckland</b>	<b>\$2,336</b>	<b>\$1,014</b>	<b>\$203</b>	-	-	<b>\$434</b>	-	-	-	<b>\$446</b>	<b>\$239</b>
Avalon	\$1,383	\$806	-	-	-	-	-	-	\$172	\$405	-
Brisbane CU	\$4,018	-	\$2,778	-	-	\$544	-	-	\$172	\$525	-
Brisbane QF/DJ	\$2,189	-	\$1,453	-	-	\$38	-	-	\$172	\$525	-
Cairns	\$4,520	-	\$2,743	-	-	\$619	-	-	\$172	\$987	-
Canberra	\$4,855	\$2,523	\$631	-	-	\$471	-	-	\$172	\$1,059	-
Christchurch	\$2,330	\$973	\$236	-	-	\$434	-	-	-	\$447	\$239
Coolangatta	\$5,078	-	\$3,323	-	-	\$139	\$558	-	\$172	\$887	-
Darwin	\$7,706	-	\$5,629	-	-	\$1,720	-	-	\$172	\$185	-
Dunedin	\$3,015	\$1,345	\$460	-	-	\$434	-	-	-	\$536	\$239
Hamilton	\$3,082	\$933	\$233	\$587	-	\$434	-	-	-	\$655	\$239
Invercargill	\$2,662	\$892	\$263	-	-	\$434	-	-	-	\$833	\$239
Mackay	\$5,759	\$876	\$3,287	-	-	-	\$352	-	\$172	\$1,073	-
Melbourne	\$3,598	-	\$2,934	-	-	\$36	-	-	\$172	\$456	-
Nelson	\$2,026	\$529	\$249	-	-	\$434	-	-	-	\$574	\$239
Palmerston North	\$2,828	\$480	\$513	\$587	-	\$434	-	-	-	\$574	\$239
Queenstown	\$3,208	\$845	\$945	-	-	\$434	-	-	-	\$744	\$239
Rotorua	\$2,870	\$279	\$721	\$587	-	\$434	-	-	-	\$609	\$239
Sydney	\$5,187	\$1,237	\$2,722	-	-	\$575	-	-	\$172	\$481	-
Sydney Regional	\$3,723	\$1,199	\$1,568	-	-	\$303	-	-	\$172	\$481	-
Townsville	\$4,666	-	\$3,691	-	-	-	\$735	-	\$172	\$68	-
Wellington	\$4,157	\$1,654	\$1,386	-	-	\$434	-	-	-	\$443	\$239

**Appendix 3: Airbiz estimates of total domestic turnaround costs – Q300**

	Total	Landing	Passenger	Aerobridge	Parking	Security	Screening	Dev't Charges	Rescue Fire	Terminal Navigation	Civil Aviation
Adelaide	\$847	\$247	\$141	-	-	\$146	-	-	\$46	\$267	-
<b>Auckland</b>	<b>\$337</b>	<b>\$162</b>	<b>\$60</b>	-	-	-	-	-	-	<b>\$44</b>	<b>\$71</b>
Avalon	\$367	\$214	-	-	-	-	-	-	\$46	\$108	-
Brisbane CU	\$1,204	-	\$823	-	-	\$196	-	-	\$46	\$139	-
Brisbane QF/DJ	\$629	-	\$431	-	-	\$13	-	-	\$46	\$139	-
Cairns	\$1,303	-	\$813	-	-	\$183	-	-	\$46	\$262	-
Canberra	\$1,401	-	\$800	-	-	\$139	-	\$134	\$46	\$281	-
Christchurch	\$374	\$175	\$81	-	-	-	-	-	-	\$47	\$71
Coolangatta	\$1,472	-	\$985	-	-	\$41	\$165	-	\$46	\$235	-
Darwin	\$2,272	-	\$1,668	-	-	\$510	-	-	\$46	\$49	-
Dunedin	\$523	\$276	\$135	-	-	-	-	-	-	\$41	\$71
Hamilton	\$508	\$147	\$68	\$174	-	-	-	-	-	\$48	\$71
Invercargill	\$423	\$215	\$77	-	-	-	-	-	-	\$59	\$71
Mackay	\$1,641	\$232	\$974	-	-	-	\$104	-	\$46	\$285	-
Melbourne	\$1,047	-	\$869	-	-	\$11	-	-	\$46	\$121	-
Nelson	\$328	\$140	\$73	-	-	-	-	-	-	\$44	\$71
Palmerston North	\$364	\$97	\$152	-	-	-	-	-	-	\$44	\$71
Queenstown	\$488	\$80	\$280	-	-	-	-	-	-	\$57	\$71
Rotorua	\$403	\$74	\$214	-	-	-	-	-	-	\$45	\$71
Sydney	\$1,597	\$367	\$807	-	\$45	\$205	-	-	\$46	\$128	-
Sydney Regional	\$1,128	\$355	\$465	-	\$45	\$90	-	-	\$46	\$128	-
Townsville	\$1,375	-	\$1,094	-	-	-	\$218	-	\$46	\$18	-
Wellington	\$611	\$84	\$410	-	-	-	-	-	-	\$47	\$71

#### Appendix 4: Data Sources

- IATA Airport, ATC and Fuel Charges Monitor
- Airways New Zealand, Standard Terms and Conditions for the provision of Airways Services, June 2010.
- Airservices Australia, Charges for Facilities and Services, Standard Contract Terms.
- Airport pricing and charges information from various airport websites.

## Appendix 5: NZ Aviation Security and Civil Aviation Charges

New Zealand Aviation Security charges and Civil Aviation passenger levies were recently revised upwards following the 1 October 2010 increase in GST from 12.5% to 15%. The effect of the increases was to leave the GST exclusive charge unchanged. The revised GST inclusive charges are summarised below.

### A5.1 Aviation Security Charges

	Domestic	International
<b>Jet – greater than 90 seats</b>		
including GST	\$4.45	\$10.22
Excluding GST	\$3.87	\$ 8.89
<b>Turboprop – less than 90 seats</b>		
including GST	Nil	Nil
Excluding GST	Nil	Nil

### A5.2 Civil Aviation Authority Passenger Levies

	Domestic	International
including GST	\$2.04	\$1.02
Excluding GST	\$1.77	\$0.89

**Appendix 6: Exchange Rates**

The following exchange rates were applied in converting to NZD.

**A6.1 Exchange rates as at 1 June 2012**

Currency	Rate
AUD	0.7747
CAD	0.7772
EUR	0.6079
HKD	5.8420
JPY	59.470
USD	0.7518

Source: <http://www.rbnz.govt.nz/statistics/exandint/b1/download.html>