

Auckland International Airport Limited FY08 – FY12 Price Setting Disclosure

**Disclosure of Forecast Total Revenue Requirement and Demand Forecasts pursuant
to clause 2.10(3) of the Commerce Act (Specified Airport Services Information
Disclosure) Determination 2010**

27 October 2011

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PART A: Introduction to disclosure for interested parties

Auckland Airport is subject to the Commerce Act (Specified Airport Services Information Disclosure) Determination 2010 ("**Determination**") made in accordance with Part 4 of the Commerce Act 1986 ("**Commerce Act**").

The Determination requires the disclosure by Auckland Airport of forecast information following the setting of aeronautical prices and the disclosure of actual performance on an annual basis.

However, under clause 2.10(3) of the Determination (the "transitional" provisions), Auckland Airport is required to make a one-off public disclosure of information relating to its forecast total revenue requirement and demand forecast in respect of the price setting event immediately preceding the commencement date of the Information Disclosure Determination 2010. This disclosure is made pursuant to clause 2.10(3) of the Determination and is therefore made in relation to the price setting event dated 1 September 2007.

Auckland Airport is not subject to price control. The purpose of this disclosure is to provide interested parties with historical information on how current prices were set and to place future pricing decisions in context. According to the Information Disclosure (Airport Services) Final Reasons Paper of 22 December 2010, disclosure will assist interested persons to undertake assessments as early as possible of whether airports' pricing and investment decisions are promoting the objectives of Part 4 and may also assist the Commission in making its report on the effectiveness of the information disclosure regime following the first price setting event in or after 2012 (paragraph 7.45). The information may also assist interested parties to compare practices across the industry.

Given that the Determination requirements could not have been contemplated at the time Auckland Airport's current prices were set, Auckland Airport does not possess, and therefore is not able to provide, all the information for this disclosure that will be required in future disclosures. Auckland Airport has worked with the Commerce Commission ("**Commission**") to come to a workable resolution of the issues that have arisen. As a result the Commission has granted Auckland Airport exemptions under clause 2.9(1) of the Determination and provided guidance on the requirements of the Determination (this guidance is publicly available on the Commission's website). In this disclosure, Auckland Airport indicates where an exemption has been granted or where it is following the express guidance of the Commission. For completeness the list of exemptions received is attached at **Appendix D**. Further, where information existed in a different format to what the Determination prescribes, but could be reliably translated into the Commission's classifications in the Schedules to the Determination, Auckland Airport has provided an explanation of its approach to providing the relevant information.

Auckland Airport notes that this disclosure contains forecast information as at 1 September 2007. These forecasts do not represent Auckland Airport's best forecasts today. Auckland Airport is currently consulting with substantial customers on future prices and expects to release another price setting disclosure in 2012.

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PART B: Disclosure required by clause 2.10(3)

1. Schedule 18 Report on Forecast Total Revenue Requirement

FOR THE PRICE SETTING EVENT 1 SEPTEMBER 2007

Regulated Airport
Pricing Period Starting Year Ended

Auckland Airport
30 June 2008

SCHEDULE 18: REPORT ON THE FORECAST TOTAL REVENUE REQUIREMENTS

ref			Year 1 30 Jun 08	Year 2 30 Jun 09	Year 3 30 Jun 10	Year 4 30 Jun 11	Year 5 30 Jun 12
6	18a: Revenue Requirement						
7	Overview of the methodology used to determine the revenue requirement						
8	Refer to Section 2.1 below						
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Regulated Airport
Pricing Period Starting Year Ended

Auckland Airport
30 June 2008

SCHEDULE 18: FORECAST TOTAL REVENUE REQUIREMENTS (cont)

ref		Year 0 *	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total
53	Year of most recent disclosure (year ended)												
54	(\$000)	for year ended	30 Jun 08	30 Jun 09	30 Jun 10	30 Jun 11	30 Jun 12	30 Jun 13	30 Jun 14	30 Jun 15	30 Jun 16	30 Jun 17	
56	18b(i): Forecast Asset Base												
57	Forecast asset base—previous year		869,088	947,253	977,233	952,743	959,135						
58	less Forecast depreciation		35,816	45,002	51,080	52,262	51,726						
59	plus Forecast revaluations												
60	plus Assets commissioned		113,981	74,982	26,591	58,654	24,153						
61	less Asset disposals												
62	plus (less) Forecast adjustment resulting from cost allocation												
63	Forecast asset base		947,253	977,233	952,743	959,135	931,562						
64													
65	18b(ii): Forecast Works Under Construction												
66	Works under construction—previous year		43,081	50,335	23,706	28,061	4,244						
67	plus Capital expenditure		121,235	48,353	30,904	30,635	24,153						
68	less Assets commissioned		113,981	74,982	26,591	58,654	24,153						
69	Works under construction		50,335	23,706	28,020	41	4,244						
70	18b(iii): Forecast Capital Expenditure												
71	Capital Expenditure by Category												
72	Capacity growth		106,313	40,588	20,582	15,065	6,720						
73	Asset replacement and renewal		14,921	7,765	10,323	15,570	17,433						
74	Total capital expenditure		121,235	48,353	30,904	30,635	24,153	–	–	–	–	–	
75	Capital Expenditure by Key Capital Expenditure Project												
76	Expanded Arrivals excl Pier B elements		41,711	–	–	–	–						41,711
77	Airfield Pavements Rehabilitation		4,718	3,527	6,708	11,825	13,025						39,803
78	Stage 1A (Stands 15 and 16 + Connector)		33,064	3,460	–	–	–						36,524
79	Northern Rwy Stage 1 (1200m)		7,287	8,225	11,557	8,311	–						35,381
80	DTB Building Works		6,754	–	–	–	–						6,754
81	Meeters and greeters, forecourt mgmt & emigration		3,517	8,807	4,274	464	–						17,063
82	Terminal Precinct Roading & Services		6,434	1,073	–	3,727	604						11,838
83	Pier B Hardstand Stage 2 (Stand 19)		722	7,661	–	–	–						8,383
84	Engine run-up incl part cross taxiway		1,340	5,809	893	–	–						8,042
85	Noise prevention		2,458	1,138	918	373	299						5,186
86													–
87													–
96	Other capital expenditure		13,229	8,653	6,554	5,934	10,225						44,595
97	Total Capital Expenditure		121,235	48,353	30,904	30,635	24,153	–	–	–	–	–	255,280
98	* Year 0 disclosure applies only if the pricing period starting year and the year of most recent disclosure do not coincide												
99													

Regulated Airport
Pricing Period Starting Year Ended

Auckland Airport
30 June 2008

SCHEDULE 18: FORECAST TOTAL REVENUE REQUIREMENTS (cont 2)

ref

106 **Basis for Cost Allocation**

107 Refer to Sections 2.2.3, 2.5.1 and 2.6.4

120 *An explanation of where and why disclosures differ from the cost-allocation Input Methodology and/or, where costs are shared between regulated and non-regulated assets, an explanation of the basis for that allocation.*

121 **Key Capital Expenditure Projects—Consumer Demands Assessment**

122 Refer to Section 2.4

135 *An explanation of how consumer demands have been assessed and incorporated for each reported project and the degree to which consumers agree with project scope, timing and cost.*

136 **(\$000)**

137 *for year ended* **Year 1** **Year 2** **Year 3** **Year 4** **Year 5**
30 Jun 08 **30 Jun 09** **30 Jun 10** **30 Jun 11** **30 Jun 12**

138 **18b(iv) FORECAST OPERATIONAL EXPENDITURE**

139 Corporate overheads

140 Asset management and airport operations

141 Asset maintenance

142 Total operational expenditure

	Year 1 30 Jun 08	Year 2 30 Jun 09	Year 3 30 Jun 10	Year 4 30 Jun 11	Year 5 30 Jun 12
Corporate overheads					
Asset management and airport operations					
Asset maintenance					
Total operational expenditure	48,752	52,532	54,552	56,938	58,889

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2. Disclosure relating to Forecast Total Revenue Requirement

2.1 Overview of the methodology used to determine the revenue requirement

This section should be read as being part of Schedule 18.

Auckland Airport adopted a building block approach to determining its revenue requirement for airfield revenues and terminal revenues. The scope of the pricing consultation excluded the revenue requirements for aircraft and freight activities and leased areas. The building block inputs are discussed under Section 2.2 below. Auckland Airport also made a number of adjustments as a result of consultation, which affected the total revenue requirement. These adjustments are discussed within each description of the relevant building block components.

2.2 Clause 2.5(1)(c)(viii) and (ix): Descriptions of revenue requirement components

Clause 2.5(1)(c) of the Determination requires a description of how each of the components of the Report on the Forecast Total Revenue Requirements in Schedule 18 of the Determination that are listed in clause 2.5(1)(c)(i)-(vii) of the Determination has been determined, including an explanation of:

- The rationale for the basis of preparing these components and any related assumptions (clause 2.5(1)(c)(viii)); and
- The extent to which these components were used to determine the forecast total revenue requirement (clause 2.5(1)(c)(ix)).

In developing each of the key inputs to the building blocks model and the model structure, the overarching rationale was to earn a normal return calculated using an appropriately determined weighted average cost of capital ("**WACC**"), an appropriate asset base and efficient operating costs. Key principles were that the resulting charges should be reasonable and derived by adopting a meaningful and transparent consultative approach. A normal return was considered to involve an assessment over time and the potential to involve gains or losses in individual years, based on a prospective NPV=0 concept and involving no monopoly rents. The allocation methodologies adopted were intended to reflect the principles that all charges should at a minimum cover the directly attributable costs of the relevant service and all other costs should be recovered having regard to Ramsey pricing principles. A further principle was that a multi-till approach should be taken.

Clause 2.5(1)(c)(x) also requires Auckland Airport to explain "the differences (if any) between the preparation of each component and the most recent corresponding historical financial information disclosed in accordance with clause 2.3" of the Determination. However, the Commission has confirmed in its guidance that, because there is no disclosure in accordance with clause 2.3 at the time of this disclosure, it follows that no disclosure under clause 2.5(1)(c)(x) is required.

2.2.1 Forecast value of assets employed – clause 2.5(1)(c)(i)

The forecast value of assets employed was based upon allocations of assets included in the pricing model determined from 30 June 2006 valuations, plus capital expenditure, less depreciation and adjustments. The following comments explain this approach in further detail.

Opening valuations

Valuations were undertaken by Seagar and Partners for land assets ("**Seagar land valuation**") and by Opus International Consultants Limited for specialised assets ("**Opus specialised assets valuation**") as at 30 June 2006. All valuations were undertaken in accordance with Auckland Airport's Asset Valuation Handbook 2006 on the basis of fair value and consistent with financial reporting and property valuation professional standards.

For land, the valuation was represented by Market Value Existing Use ("**MVEU**"), estimated using both a zonal and a discounted cash flow approach. The MVEU methodology was intended to determine the cost that the developer of a competing airport facility could expect to have to pay to acquire the equivalent land in order to provide a similar service. For operational airfield land this comprised an opportunity cost valuation of the land in its next best alternative use, which equated to \$600,000 per hectare, plus holding and planning costs to convert the land to an airport of \$261,700 per hectare, to give an MVEU value of \$861,700 per hectare. The MVEU approach was considered consistent with the outcome that would be likely to prevail in a competitive market. For a complete explanation of the valuer's methodology, refer to the attached land valuation report at **Appendix A**.

The basis for the non-land valuation methodology was Optimised Depreciated Replacement Cost ("**ODRC**"). For a complete explanation of the methodology adopted, refer to the attached valuation reports in **Appendix B**.

A number of adjustments were made to the valuation reports in order to determine the asset base used for pricing. Key steps involved:

- using the 30 June 2006 valuations for all identified activities as the starting base;
- adjusting for differences in scope between the all specified activities and the scope of the assets included in the pricing (e.g. removal of all aircraft and freight related assets and removal of assets associated with identified tenancies); and
- making various adjustments as described in the "allocations" section below.

Capital expenditure forecast

Annual forecasts were prepared for capital expenditure. Major strategic projects were based on forecasts provided by Beca Carter. The capital expenditure forecasts were based on 2006 dollars, and nominalised based on forecast escalation costs. The forecasts were subject to standard planning variations depending on their stage in the project management life cycle. Projects in detailed design or construction were updated for latest cashflow forecasts from the quantity surveyors. For multi-year projects an allowance was made for projects to have some spillover from year to year. In addition to this, capitalised interest and staff costs estimates were also undertaken. For each project the estimated aeronautical share of assets for pricing purposes was estimated and applied in the pricing asset base from the commissioning year of each project.

Depreciation forecast

Depreciation was forecast based on the economic lives ascribed to approximately 50,000 existing assets per the fixed asset register, consistent with the Opus specialised assets valuation. Forecast capital expenditure projects were grouped into average life categories of 3, 10, 15, 30 and 40 years.

Allocations

Auckland Airport maintains a detailed property, plant and equipment register. For the purposes of the Airport Authorities Act ("**AAA**") information disclosure reporting regime that applied at the time, Auckland Airport ascribed an allocation code to each asset. Assets were either allocated directly to airfield, terminal, aircraft and freight or commercial, or an allocation methodology was used to apportion these. Where assets support a number of activities, analysis was carried out to assess the approximate

distribution between identified and non-identified airport activities. For the purposes of price setting, these allocations were further adjusted to reflect the scope of the services included in pricing. In particular, terminal leased areas and aircraft and freight activities were excluded from the price setting event and were therefore not included in the forecast value of assets employed. This allocation process formed the basis for the estimation of the opening asset values. When forecasting capital expenditure projects and subsequently, additions, an allocation percentage was applied to each project to reflect the estimated fraction of the asset to be included in the revenue requirement for the purpose of price setting for the relevant pricing period.

The reported values and allocations for the information disclosure regime at the time represented Auckland Airport's and its expert advisors' view of the appropriate value of the baseline assets used for regulatory purposes. However, following consultation with substantial customers, Auckland Airport made the following adjustments to the disclosure valuations and allocations for the purposes of this price setting event:

- The southern runway asset value was adjusted down by \$83.6m as follows:
 - Wiroa Island land was excluded.
 - Reduced the value per hectare from the MVEU value of \$861,654 per hectare of airfield land in the Seagar land valuation, by the estimated holding, planning and levelling costs to \$600,000 per hectare for airfield land;
 - Reduced the value per hectare of reclaimed land in the Opus Reclaimed Land & Seawalls, Runway, Taxiways & Aprons and Infrastructure Assets Valuation from replacement cost to \$600,000 per hectare; and
 - Allocated 50% rather than 100% of runway end protection zones.
- The northern runway asset value was adjusted down by \$68.2m to:
 - remove 44% of the airfield land to reflect a partial use of the Northern Runway at 1200 metres and the staged nature of development;
 - reduce the value per hectare from the MVEU value to an MVAU value;
 - remove 44% of the runway end protection areas; and
 - remove 72% of the land adjacent to runway end protection zones.
- The seabed was removed from the value of assets, reducing the pricing asset base by \$8.8m.
- Land under the international and domestic buildings was included at reduced rates, comparable to the airfield value for pricing of \$600,000 per hectare. The allocated impact of this was a reduction of \$24.6m.
- Land under airfield roads was adjusted to remove the roads associated with Wiroa Island and reduce the value per hectare from MVEU to the \$600,000 per hectare airfield value. The impact of this was a reduction of \$4.3m.
- The land valuation associated with Rescue Fire Facilities was reduced from the MVEU to \$600,000 per hectare, as was the land under the Waste Collection services. The impact of this was a reduction of \$1.8m.
- Remaining reclaimed areas used for storm water were reduced from the ODRC valuation in the Opus specialised assets valuation to the \$600,000 value per hectare derived from the Seagar land valuation. The impact of this was a reduction of \$0.4m.

In total the reduction to the value of the asset base made by Auckland Airport during the consultation process from the valuations recommended by Auckland Airport's valuers was \$192m. The rationale for doing so was to provide a commercial response to views expressed by substantial customers during the consultation process.

The forecast total revenue requirement was then based on the average forecast assets employed across opening and closing years, exclusive of working capital.

Forecast value of assets employed (\$000)

	2007	2008	2009	2010	2011	2012
Forecast Asset Base	869,088	947,253	977,233	952,743	959,135	931,562
Forecast Value of Assets Employed - Average of Opening and Closing Asset Base		908,170	962,243	964,988	955,939	945,349

2.2.2 Forecast cost of capital – clause 2.5(1)(c)(ii)

Auckland Airport engaged Dr Alastair Marsden of Uniservices to provide expert advice on the WACC to be used for this price setting event that:

- reflected market evidence of the required returns of equity and debt;
- was based on the Capital Asset Pricing Model (“CAPM”) with a New Zealand focus;
- recognised that the appropriate WACC was an imprecise calculation and should fall within a range; and
- reflected inherent risks, including reference to the ultimate pricing structure and recovery mechanism.

The generally accepted approach to the calculation of WACC has been applied. This represents the weighted average cost of equity (adopting the simplified version of the Brennan-Lally CAPM) plus the cost of debt, net of corporate tax deductions, as follows:

$$WACC = k_e \frac{E}{V} + k_d (1 - t_c) \frac{D}{V}$$

Where:

k_e = cost of equity capital

k_d = cost of debt

E/V = “market” value of equity/total enterprise value

D/V = “market” value of debt/total enterprise value

t_c = corporate tax rate

$$k_e = r_f (1 - T_i) + \beta_L (TAMRP)$$

Where, in addition to the terms already defined:

r_f = Risk free rate

T_i = The average (across equity investors) of their marginal tax rates on ordinary income

β_L = Levered beta

TAMRP = Tax-Adjusted Market Risk Premium

The calculation of WACC for a particular portion of a company is subject to variables that require expert assessment and judgement. As such, Auckland Airport did not establish a single point estimate of WACC to apply for pricing but rather established an estimated range and evaluated the forecast building block outcomes, including the forecast revenue required, within this range. In order to complete Schedule 18, Auckland Airport used the mid-point estimate that was provided together with the range advised by Uniservices.

The following tables summarise the key WACC elements and resultant WACC ranges for charges relevant to the price setting event. The key distinction between them is the change in corporate tax rate legislated by the Government:

	Aeronautical pricing WACC to 30 June 2008	Aeronautical pricing WACC from 30 June 2008 to 30 June 2012
Risk free rate	7.26%	7.26%
Post tax market risk premium	7-8%	7-8%
Company tax rate	33%	30%
Debt premium	1.29-1.39%	1.29-1.39%
Debt to debt plus equity ratio	35-45%	35-45%
Asset beta	0.5-0.7	0.5-0.7
Nominal after tax WACC range	8.67-10.88%	8.76% -11.00%

The risk-free rate was based on the five year New Zealand Government bond rate. The appropriate TAMRP was based on a range of expert views and evidence available at the time and is determined on a forward-looking basis, taking into account future market expectations.

The debt ratio reflected the target gearing ratio for Auckland Airport's aeronautical activities.

The asset beta reflected a number of considerations including direct and indirect estimation methods, previous Commerce Commission decisions and the nature and term of the price period.

Net revenues for airfield and terminal activities were compared to the return calculated by multiplying WACC by the forecast asset base, for the upper and lower bounds of the WACC range. This enabled Auckland Airport to determine that the forecast price changes and subsequent required revenues provided an appropriate level of return.

2.2.3 Forecast operational expenditure – clause 2.5(1)(c)(iii)

Key steps taken by Auckland Airport to determine forecast operational expenditure for the purposes of the price setting event were as follows:

1. A review was undertaken of total operating costs, which were benchmarked to test whether Auckland Airport's cost base was efficient. Auckland Airport was the fourth lowest cost operator in comparison of fifty airports sampled by independent research house TRL, in its 2006 TRL Airport Performance Indicators report.¹ Auckland Airport used budget analysis for the year ended 30 June 2007 as the base for forecast operational expenditure for the next pricing period and updated this with a forecast at 30 June 2007 prior to the price setting event.

¹ Auckland Airport is the most complex airport operation in New Zealand and is not easily compared on an operating cost basis to Wellington and Christchurch airports. Benchmarking within New Zealand reflects the fundamental differences in passenger mix between airports. Auckland Airport's aeronautical operating costs per passengers is higher than Wellington Airport's, consistent with international passenger processing being significantly more complex than domestic passenger processing. In 2006 Wellington Airport's cost base was predominantly a domestic operation (with 14% international passengers), whilst Auckland Airport's cost base was dominated by international passengers (56.7%).

2. For each key area of operating cost, cost drivers have been estimated, resulting in a forecast of operating cost to 2012. Specific adjustments were also made for any anticipated changes to the baseline (positive or negative). Key assumptions are described in Section 2.5.1 below.
3. Costs were analysed by business unit and, where possible, allocated directly to aeronautical and non-aeronautical activities.
4. Remaining common costs were then allocated based on a set of cost allocation principles.

Auckland Airport analysed base year business unit information in order to determine direct and common costs. Auckland Airport sought advice from Howarth Porter Wigglesworth Limited and NERA on appropriate cost allocation methodologies. A new common cost allocation methodology ("**CCAM**") was implemented under Howarth Porter Wigglesworth's guidance. Key elements of this new methodology included a "bottom up" analysis of efficient standalone common costs, with an allocation of common cost efficiencies between aeronautical and non-aeronautical cost centres. However as a result of the consultation process and following specific feedback from BARNZ on behalf of the airlines, Auckland Airport adopted a space based allocation approach to common costs, which had no evident proxy allocator, on the basis that this was less complex and therefore more transparent for users.

Auckland Airport has disclosed its total forecast operational expenditure in Schedule 18, however, Auckland Airport did not prepare its forecasts for the previous pricing consultation according to the categories prescribed in Schedule 18 of the Information Disclosure Determination. As a result, Auckland Airport is only able to provide its total forecast operational expenditure and has received an exemption from the Commission from disclosing its forecast operational expenditure in accordance with these categories.

2.2.4 Forecast depreciation - clause 2.5(1)(c)(iv)

All specialised assets at Auckland Airport have been depreciated on a straight line basis over their expected useful lives. The approaches for determining the expected useful life and remaining life for all specialised assets (except plant and equipment) are provided in the Opus specialised asset valuation reports in the Appendices (**Appendix B**: Opus Valuation – 2006 Valuation of Specialised Buildings and **Appendix C**: Opus Valuation – 2006 Valuation of Reclaimed Land and Seawalls, Runways, Taxiways, Aprons and Infrastructure Assets). These have been calculated in accordance with the New Zealand Infrastructure Asset Manual ("**NZIAM**") and then further modified if local knowledge and experience suggests that this is appropriate.

On a forecast basis, depreciation was estimated in two parts. The existing asset base for airfield and terminal assets was identified, together with the forecast depreciation for the 2007 financial year based on the Opus valuation. This asset base and depreciation thereof was forecast to 2012 based on the effective depreciation rate for existing airfield and terminal assets. For assets yet to be created, each project was assigned to an average life category of 3, 10, 15, 30 or 40 years. These projects were then forecast to be depreciated in the financial year following the forecast commissioning date for each project.

2.2.5 Forecast tax - clause 2.5(1)(c)(v)

Auckland Airport forecast tax based on an estimated effective tax rate of 32.5% for the 2008 financial year and 29.5% for financial year 2009 and beyond, reflecting the announcement of the change to corporate tax rate in the 2007 New Zealand Government Budget and the assessed difference between the prima facie tax rate and the aeronautical estimate of cash tax payable for the financial year. Auckland Airport's company-wide effective tax rate was used as a proxy for the aeronautical effective tax rate.

2.2.6 Forecast revaluations - clause 2.5(1)(c)(vi)

In its initial proposal on 25 July 2006, Auckland Airport included prospective revaluation growth in land and non-land and deducted this from the revenue requirement.

In its 13 March 2007 proposal, Auckland Airport sought feedback on the option of continuing with forecast asset appreciation rates or placing a moratorium on revaluations of existing aeronautical assets for the upcoming and next pricing period. This approach was modelled on the Australian Productivity Commission ("**APC**") approach in its draft report on airport pricing, which was released during the consultation process.

Auckland Airport noted the support for the conclusions of this report by most airports as well as the airlines in, and operating to Australia. Auckland Airport observed that it was the most recent and authoritative aeronautical regulatory determination in Australasia. In order to attempt to reach a compromise with the airlines, which had supported the approach during consultation, Auckland Airport decided to follow the recommendations of the APC report with respect to the treatment of asset revaluations.

Auckland Airport agreed to roll-forward the 2006 assets for additions, with no revaluations until at least 2017, subject to there being no change to any future regulated approach to asset revaluations.

2.2.7 Any other components - clause 2.5(1)(c)(vii)

In this section Auckland Airport describes the other components of the forecast total revenue requirements set out in Schedule 18 which had a material effect on the forecast revenue requirements.

Other components

- Wash up adjustment on the Airport Development Charge:

In 2005 the Government transferred responsibility for the collection of Aviation Security and Civil Aviation Authority levies from airports to airlines. Until this point in time airports were required to pay \$5.00 (including GST) from each international departure fee collected to the agencies. During consultation it was agreed that the \$5.00 previously paid to the Government by the airport from the then \$25.00 international departure fee could be retained by the airport up until charges were reset in 2007, with the monies being used to meet any additional unforeseen capital expenditure relating to security screening requirements, and with any unspent monies being carried forward as a credit into the 2008-2012 pricing period for passenger based international terminal charges. The carry forward adjustment was \$7.5m.²

² The structure of the Schedule 18 model does not easily lend itself to reflecting this adjustment. As such the adjustment is not shown in Schedule 18 quantitative numbers. However in determining the revenue requirement Auckland Airport proposed a reduced revenue requirement as a result of this factor. The reconciliation of the Schedule 18 adjustments and the pricing model are shown in a table on the next page.

- Sharing of Retrospective Revaluations to Income:

Auckland Airport sought advice from NERA in relation to whether it was necessary or appropriate to take account of historical or retrospective valuation gains in setting prices for future periods. In summary, the advice confirmed that there was no *ex ante* agreement to wash-up variations to forecast and it was not appropriate to make an allowance for retrospective valuation gains. NERA noted that to do so would appear inconsistent with the approach taken at the time prices were last reviewed. Despite this, due to the exceptional increase in land values since 1999, following consultation, Auckland Airport made a reduction to its revenue requirement of \$99m.

2.2.8 Description of any other factors considered in determining the forecast total revenue requirement

This section should be read as being part of Schedule 18.

- Partial year:

This adjustment represents the part year adjustment to account for the fact that there was only ten months in the first year of the forecast model forecast period, i.e. running from 1 September 2007 to 30 June 2012, rather than from 1 July 2007 to 30 June 2012. This adjustment was included in the cashflows.

- Annual NPV deficits:

Auckland Airport did not seek to implement pricing that met the revenue requirement in each and every year – rather to consider the time value of money and to approximate NPV=0 through a smoothed set of charges. This adjustment is therefore required to reduce revenues (over the five year period) from the Commission’s presumption that cost of capital is achieved.

The pricing model forecast was based on the WACC range provided in Section 2.2. NPV =0 was within the WACC range for the forecasts for airfield and terminal revenues in the price model. However, in order to complete Schedule 18, Auckland Airport has averaged the low and high WACC shown in Section 2.2.³

The table below shows a deficit on required revenues over the future pricing period of \$150.3m and the reconciliation of this to the price model using the arithmetic average of the low and high WACC estimates.

\$m	Total	2008	2009	2010	2011	2012
Other Factors in Commission Schedule 18a						
Partial year adjustment in cashflows	(5.5)	(5.5)				
Annual NPV deficits	(144.8)	(28.5)	(36.2)	(34.2)	(27.1)	(18.9)
Total	(150.3)	(33.9)	(36.2)	(34.2)	(27.1)	(18.9)
Reconciliation to price model						
Offset of part adjustment in cashflows	(5.5)					
Revaluation adjustment	(99.0)					
Wash-up on the ADC	(7.5)					
Discounted cashflow effect of NPV deficit	(25.7)					
Price model mid-point NPV value	(12.6)					
Total	(150.3)					

³ Pricing model dated 02 July 2007.

2.3 Valuation report on which the value of the forecast value of assets employed is based

Clause 2.5(1)(d) of the Determination requires that where the forecast value of assets employed is based on a value other than that used for the purposes of the latest disclosure under clause 2.3 of the Determination (historical financial information), public disclosure of the valuation report on which the value of the forecast value of assets employed is based is required.

There has been no disclosure under clause 2.3 of the Determination to date. Auckland Airport therefore attaches the valuation reports dated 30 June 2006 at **Appendices A - C** (which are already publicly available as they were disclosed as part of the information disclosure requirements under the AAA. Refer to the forecast value of assets employed Section 2.2.1 above for an explanation of the adjustments to these valuations for the purpose of setting prices.

The relevant valuations for the assets used in pricing are as follows:

Appendix A: Seagar Valuation – Aeronautical Land and Other Land Assets – 30 June 2006

Appendix B: Opus Valuation – 2006 Valuation of Specialised Buildings

Appendix C: Opus Valuation – 2006 Valuation of Reclaimed Land and Seawalls, Runways, Taxiways, Aprons and Infrastructure Assets

2.4 Forecast capital expenditure

2.4.1 Clause 2.5(1)(e): Aims and objectives of key capital expenditure projects for ten year forecast period

Clause 2.5(1)(e) of the Determination requires that Auckland Airport disclose its forecast capital expenditure by category and key capital expenditure project as disclosed in accordance with Schedule 18. Schedule 18 requires information extending over a ten year forecast period (financial years 2008-2017) to be disclosed. The Commission has granted Auckland Airport an exemption from providing forecast information for financial years 2013 to 2017 for this specific transitional disclosure on the basis that Auckland Airport did not consult on forecast information for a ten year period for the purpose of setting its aeronautical prices. Auckland Airport has therefore disclosed information regarding its forecast capital expenditure and key capital expenditure project for financial years 2008 to 2012 only. Forecast capital expenditure by category is disclosed in Schedule 18.

Clause 2.5(1)(e) also requires Auckland Airport to advise "the aims and objectives of any proposed investments." The Commission has granted an exemption from this requirement and has confirmed that airports must instead describe the aims and objectives of each key capital expenditure project as disclosed in accordance with Schedule 18. As noted above, as Auckland Airport has been granted an exemption from disclosing forecast information for financial years 2013 to 2017, Auckland Airport is therefore only required to disclose the aims and objectives of the key capital expenditure projects for financial years 2008 to 2012 for the purpose of the transitional disclosure. Auckland Airport provides this information below.

2.4.2 Clause 2.5(1)(f): Descriptions of key capital expenditure projects for period of five consecutive years immediately following price setting event

Clause 2.5(1)(f) requires the public disclosure, for the period of five consecutive years immediately following the price setting event, a description of each key capital expenditure project, including an explanation of:

- (i) the aims and objectives of each key capital expenditure project;
- (ii) the process by which the need for the key capital expenditure project was determined, including any assessment criteria;
- (iii) any consumer engagement undertaken as part of the process referred to in clause 2.5(1)(f), including a description of how consumer demands have been assessed;
- (iv) any alternative expenditure projects considered, and the rationale for excluding those alternative projects;
- (v) the extent to which the key capital expenditure project is reflected in pricing; and
- (vi) any constraints or other factors on which successful completion of each key capital expenditure project is contingent.

A "key capital expenditure project" for the purpose of the Determination means a current or future project or programme of capital expenditure that involves total expenditure of more than \$5 million over the life of the project or programme. Auckland Airport's key capital expenditure projects have been included in Schedule 18 and the descriptions of these projects, in accordance with clause 2.5(1)(f) of the Determination, are provided below.

Background

During consultation it was acknowledged that there was uncertainty over project timing, outturn cost, and outturn uses. Auckland Airport consulted during the AAA price consultation on the likely nature of strategic projects over the forthcoming price period. Whilst the forecast represented the latest Auckland Airport view at the time, it was also acknowledged that solutions would evolve and issues would develop over the intervening periods which could alter project priorities. It was noted that there is a high level of consultation by Auckland Airport with BARNZ closer to the time of material projects, focussing on technical and operational details, which would influence the actual timing and specification of key projects.

At the stage of forecasting there is a degree of uncertainty. The forecasts were based on Auckland Airport's best estimate of projects which would be required in order to best match the forecast demand environment. Where project estimation is made prior to preliminary design project estimates can only be provided with a $\pm 30\%$ range of accuracy. During the design process Auckland Airport would further test the specification, prioritisation and project timing of proposed projects.

Other than the specific project constraints and contingent factors, it was noted in the March 2007 pricing proposal that the project-by-project outline provided by Auckland Airport was to serve as a guideline of the likely nature of the capital expenditure but this was indicative only.

Auckland Airport noted that project priorities would be influenced by the nature of demand growth and that actual capital expenditure decisions could not be considered in isolation of actual demand environment in the forthcoming period.

These forecasts were also subject to refinement prior to decision making, through consultation with stakeholders and in particular airlines as required under Section 4C of the AAA.

Expanded Arrivals excluding Pier B

This project involved the expansion of the arrivals border processing area and the provision of an expanded retail area to meet a sustained throughput of 2,000 passengers per hour and a design peak hour of 2,500.

- (i) Aims and objectives: The aims and objectives of this project were to meet the interim forecast design demand of 2,000 busy hour passengers (an increase over the then existing capacity of 1,500 hourly passengers) with an enlarged primary (Immigration) processing area with associated support areas and offices, a reconfigured and expanded secondary (the Ministry of Agriculture and Forestry ("MAF") and New Zealand Customs Service ("Customs") border control) processing area and a new 2,000 sq m arrivals duty free retail area.
- (ii) Process for determining need: Auckland Airport initiated a Master Planning Study in 2004 as the existing passenger facilitation areas were reaching capacity and the annual average growth rates in passenger numbers was continuing at around 7%. A separate Terminal Expansion Plan Study was undertaken in parallel with the Master Plan Study and was completed in 2005. The objectives of this study were to provide a terminal capable of managing a design peak hour of 2,500 passengers per hour in 2015 and 3,000 passengers per hour in 2025. A number of projects were developed as a consequence of the study to meet the forecast demand by a series of staged projects. The Stage 3A Expanded Arrivals was the initial stage. The facilities required for this project to meet the interim forecast demand of 2,000 passengers per hour were assessed by computer simulations carried out by both the Auckland Airport's consultants and the New Zealand Customs Service.
- (iii) Consumer engagement: The Terminal Expansion Plan Study dated September 2005 was finalised following extensive consultation with members of BARNZ, ground handling agents and border control agencies. The Terminal Development Group forum met on a monthly basis from September 2003 and all meetings were minuted. Three basic concepts were discussed, called Dual, Single and Twin processors. The Dual Processor was determined to be the scheme which best met the requirements of the expanding airport and increasing demand. The Expanded Arrivals project was the initial stage of the development of the arrivals area for the expanded terminal. Further consultation was held by the Terminal Development Group during the detailed design stages. At these meetings the proposed flow and function of the expansion was discussed with the airlines, border agencies and Auckland Airport customer services and a consensus was reached on the preferred layouts.
- (iv) Alternative projects considered: As noted in (iii) above, the process carried out for the Terminal Expansion Plan Study addressed three main options. Consultation with the airlines, border agencies and Auckland Airport on the respective merits of the Dual and Twin options resolved that although the Twin option was initially assessed as the preferred option, the greater business risk associated with the Twin option resulted in the Dual option being selected as the preferred option.
- (v) Extent reflected in pricing: Based on the concept level estimate of the project cost and elements, commercial and non-commercial usage was estimated. At the time of pricing 83% of the forecast expenditure project, \$63.5m, was included as the estimate for the pricing asset base commissioning increment. Commissioning was expected by the end of 2008 financial year.
- (vi) Constraints or contingent factors: The Expanded Arrivals project was primarily an expanded border control facility and as such, agreement had to be reached with the three relevant border agencies, the Customs, MAF and the New Zealand Immigration Service. Agreement was reached on the proposed layout following extensive consultation with these parties and airline customers.

Discussion was also held with the Local Authority, Manukau City Council, and the New Zealand Fire Service with respect to the building consents, evacuation plans and the proposed active and passive fire protection systems.

This project was contingent on a connecting walkway to a new Pier B and the relocation of the existing public transportation area. The latter was required initially to allow access to the project footprint and the connecting walkway and Pier B. All projects needed to be completed simultaneously to allow arrivals from both Piers A and B to use the new arrivals area.

Airfield Pavements Rehabilitation

This series of projects involve the replacement of areas of the airside pavements that have reached the end of their economic life, to provide for safe and unconstrained use.

- (i) Aims and objectives: The aims and objectives of this project were to replace areas of concrete airfield pavement at the end of their economic life, and construct new pavements to provide for safe and unconstrained use.
- (ii) Process for determining need: Auckland Airport undertakes regular inspections of the pavements, and commissions an annual pavement evaluation report to review the condition of the airfield pavements and to recommend which areas of the pavements are at the end of their economic life and require replacement. A plan assessing areas of recommended replacement over the next five years was undertaken prior to price setting.
- (iii) Consumer engagement: Auckland Airport reviews the need for these projects from an engineering and operational perspective and consults with Airways Corporation of New Zealand Limited (“**Airways**”) as the operational air traffic control agency. Airline views have also been sought during price consultation.
- (iv) Alternative projects considered: In 1998 a Pavement Rehabilitation Study was undertaken by Auckland Airport’s aeronautical engineering consultant, Beca, to investigate options for the reconstruction of the airfield pavements. The option selected was a staged reconstruction of the pavements with new concrete pavements.
- (v) Extent reflected in pricing: This key capital expenditure programme of works was estimated to increase airfield assets in the pricing model by \$39.8m over the five year pricing period.
- (vi) Constraints or contingent factors: Each year the need for the recommended pavement replacement is reviewed and prioritised.

Stage 1A Pier B (Stands 15 and 16, plus Connector)

This project involved the construction of two new aircraft contact gates capable of handling multiple aircraft, including the A380, to meet increasing demand for gates.

- (i) Aims and objectives: The aims and objectives of this project were to meet the forecast demand for contact gates for aircraft (i.e. gates that have airbridge access to a gate lounge and the terminal) and to provide two A380 capable contact gates. The international airport had ten contact gates and nine remote stands in respect of which passengers needed to be bussed to and from the aircraft. It was forecast that twenty contact and eight remote stands would be required by 2015 including provision for contact stands for two A380 type aircraft. An aim of the project was to ensure that bussing levels could be maintained within an acceptable industry standard.
- (ii) Process for determining need: Table 16 of the Terminal Expansion Plan Study Forecast and Facility Requirements 2006-2025 report outlined the forecast requirements for international contact and remote stands for the design years of 2015 and 2025. In addition, Auckland Airport had already been advised by Emirates that provision for an A380 contact gate would be required by late 2008 or early 2009 with the prospect of a further A380 gate shortly thereafter.

The development of the multi-aircraft capable stands, a first for New Zealand and ensuring maximum flexibility of aircraft stand use, followed very lengthy and detailed consultation with the airlines. All stands were designed to have fuel hydrants, ground power units, pre-conditioned air and baggage lift facilities.

A number of proposed solutions were consulted on with the airlines to meet the requirement for an A380 contact gate on the existing Pier A. However, the age and configuration of Pier A meant a satisfactory solution was not identified, hence, following discussion with the airlines, provision was included in the new Pier B.

- (iii) Consumer engagement: The Terminal Expansion Plan Study dated September 2005 determined the preferred location and configuration for a twelve contact gate pier and this was also addressed at consultation meetings with the airlines, ground handlers and the border agencies. Consultants also advised on passenger experience considerations. Further consultation was held with the airlines, ground handlers, border agencies and Auckland Airport customer services during the detailed design stages.
- (iv) Alternative projects considered: Meetings were held with the airlines and ground handlers during 2005 to develop various layouts. On 30 June 2005 and 13 October 2005 specific options were tabled for discussion and preferred options were identified by Auckland Airport and external parties. A staged sequence was agreed where only two gates, with multi-aircraft stands i.e. able to handle two Code C (e.g. A320 B373) aircraft or one Code D (e.g. B767), E (e.g. B747, B777, A330, A340) or F (e.g. A380) aircraft, would be constructed initially. The pier was designed to provide maximum flexibility for future use and a staged solution. Stage 1A of the Pier B development, involved the initial stage which was designed to provide only two gates and less than half of the final pier.
- (v) Extent reflected in pricing: During the price consultation the forecast capital expenditure was refined and target efficiency was added. This key capital expenditure project was estimated to increase the asset base by \$42.5m in the 2009 financial year. There was an agreement to a phased recovery for the connector element of this project, with a lower return initially, as well as a balancing recovery of the previous lower return, so that over the life of the asset a normal return would still be earned. A 50% return was to be earned on the connector element of the project, up until the earlier of 2012 or the construction of additional contact gates, with a full recovery being earned from 2012 (or four gates), followed by a recovery of over 100% once eight gates became operational.
- (vi) Constraints or contingent factors: A number of stakeholders required consultation. Agreement was required with the Aviation Security Service on the location of the screening facilities for departing passengers. Though there was a preference by the Aviation Security Service for the screening point to be as close to the aircraft as possible, it was agreed that this was not an economic solution and that locating screening facilities at the departure processing line within the terminal provided an acceptable level of security.

Discussion was also required with the Local Authority, Manukau City Council, and the New Zealand Fire Service with respect to the building consents, evacuation plans and the proposed active and passive fire protection systems.

To provide operational contact stands this project requires the successful implementation of the Expanded Arrivals project.

Northern Runway Stage 1

This project involves the provision of a 1200m northern runway to allow use by smaller regional aircraft.

- (i) Aims and objectives: The aims and objectives of this project were to efficiently and incrementally provide long-term runway and apron capacity to meet the anticipated needs of users and to enhance the Southern Runway efficiency by “decanting” small, slow aircraft to the northern runway.
- (ii) Process for determining need: The need for design and construction for delivery of the first stage of the Northern Runway Development was based on a number of foundational studies, together with preliminary design and definitional studies which commenced in June 2006. Previous work undertaken included:
- A study in 1999 to support the Mayoral Mediation Forum and District Scheme planning approvals which provide for a runway to be constructed and used.
 - A master grading study by Sinclair Knight Mertz completed in 2003, which defined the finished ground levels for the runway reserve.
 - A stage 1 feasibility study by Beca in 2004, which considered potential options for alignment and an order of cost for capital forecasting purposes.

Preliminary design undertaken between June 2006 and May 2007 provided the following:

- A detailed geotechnical investigation and associated reports.
- A Northern Runway Development Stage 1 Project Plan.
- A Northern Runway Development Basis of Design Report.
- A Preliminary Business Assessment and Development Brief.

The key stakeholders that Auckland Airport engaged in determining the need for the project included airline customers and Airways.

Key strategic drivers and considerations for an operational second runway included:

- Apron constraints around the southern runway, particularly around the Domestic Terminal.
 - Peak hour capacity constraints on the southern runway (05R/23L), in particular, delays caused by smaller aircraft on the main runway.
 - The need to migrate domestic operations to the northern runway sometime between 2010 and 2015, identified in the 2005 Master Plan and subsequent review work by Airways and Airbiz.
 - The perceived requirement to have an operational 1,200m runway before the Manukau City Council District Plan Review commenced circa 2011.
- (iii) Consumer engagement: Stakeholder engagement was initiated with airline users, BARNZ and various government agencies. External consultation involved a Strategic Planning Group which included (Airways, BARNZ, Airport Operations and Beca) and an Operations Task Force with broader representation including the airline pilots association (ALPA), Air New Zealand, BARNZ and the Civil Aviation Authority. Consideration was also given to the fact that eventual operationalization of a further runway would involve a set of customers and suppliers. In a separate forum, the AAA price consultation, Auckland Airport sought feedback on the proposed first stage of development of the Northern Runway.

The position of the airlines represented by BARNZ was to support the development of the northern runway at some stage, but to disagree with the timing of the development. BARNZ continued to provide advice and input into the technical consultation. Auckland Airport's smallest airline customers (for example, Mountain Air and Great Barrier Airlines) endorsed the development of a low cost, basic airfield infrastructure aligned with their level of operation.

- (iv) Alternative projects considered: During the technical specification and operational consultation all key elements of the Northern Runway were reviewed, ranging from the minimum infrastructure 1200m proposal to a more substantial regional facility with a longer runway, additional taxiways and aprons catering for larger regional aircraft. The minimum facility with a 1200m long Code 2B runway was selected. In addition, alternatives for the alignment of this 1200m Stage 1 runway were considered, including the East-west location of the initial 1200m runway and the alignment on the future runway or taxiway. The alignment on the future runway and extending from the future western threshold was selected.

Key concept design recommendations and the rationale for excluding alternatives were:

- The positioning of the runway at the western end of the final 2,150m runway layout, as opposed to other positions, was agreed as the most beneficial approach based on analysis of a range of options. This positioning ensures operational clearances are achieved relative to George Bolt Memorial Drive, earthworks quantities are kept to a minimum and costs are the lowest of the options.
- The pavement strength and surfacing type will be a low cost option for initial users. The pavement structure will be built in a manner that can be added to incrementally as the runway grows as opposed to building early.
- Security and rescue fire facilities will comply with Civil Aviation requirements, but relative to more fully specified options it was recommended to adopt a standard to meet the minimum provision.
- No over-provision of infrastructure is to be made to future proof the initial stages of development. A strategy was recommended to operate a temporary runway on the future taxiway alignment when the initial runway stage requires strengthening, widening and lengthening to accommodate the next phase of growth.

- (v) Extent reflected in pricing: Between 2007 and 2012, \$30.9m, before capitalised staff and interest costs. (2007 dollars) of expenditure associated with the Northern Runway Development was included in the capital expenditure forecast for the pricing model. The improvements were forecast to be commissioned at the end of June 2011 at a total nominal value of \$36.3m. As a result of consultation Auckland Airport was asked to consider removing this from the capital expenditure forecast. Sensitivity analysis indicated that exclusion of the northern runway capital expenditure from the model did not change the forecast price path, as this project only impacted the forecast asset base in the final year. On balance management believed the project would proceed and therefore included it in the forecast expenditure.

- (vi) Constraints or contingent factors: considered to create risks for the successful completion of the project are summarised below:

- (a) Diverging airline views. The timing of the Northern Runway Development was discussed with the airlines during the master planning process. Although the major airlines saw merit in having an operational second runway at some stage, with Auckland Airport proposing to develop the Northern Runway in advance of the Manukau Review, the airlines were unwilling to sign off on that timing because of what they perceived as the aeronautical pricing implications. The intended principal users of stage one of the northern runway, being the commuter and general aviation airlines, were however very supportive of the project proceeding with urgency.

- A review of runway capacity drivers highlighted that the southern runway was at practical capacity during some peak hours and in poor meteorological conditions. With forecast growth, delays both on the ground and in-flight will become more frequent in the short to medium term. Changes in forecast demand could create risks to the delivery programme
- Comprehensive earthworks and drainage consents are held for development work in the north airport area inclusive of the northern runway reserve. A condition limiting Auckland Airport to a maximum of 25ha of ground open at any one time was an issue requiring careful management. Careful planning and close liaison with the consenting authority (Auckland Regional Council) was recommended to ensure this would not cause a constraint on development progress.
- Much of the construction work was to be weather sensitive. If sustained periods of poor weather were encountered, this could delay the delivery of the infrastructure, or increase costs to accelerate and achieve completion.
- Geotechnical testing conducted at the time provided only a representative sample of the ground conditions to be encountered. Larger quantities of poor soils, such as peat, may be present. If encountered, this would lead to greater earthwork volumes, higher than anticipated cost, and potential programme delays.
- The runway development area contains a number of historic sites, both Māori and early European. Work was underway to ensure the necessary approvals were in place so that any encumbrances were removed and construction could begin in a timely manner. Consultation was underway with Tangata Whenua and the NZ Historic Places Trust.
- A communications programme was developed to ensure the public, Manukau City Council and other interested parties could be well informed in a timely and continuing manner to reducing stakeholder risks.

Interim capacity projects (meeters, greeters, emigration and forecourt)

A provision was made within the capital expenditure forecast for works associated with interim capacity works.

- (i) Aims and objective: The aims and objectives of this project were to provide for the maintenance of service standards in the existing meeters and greeters areas and in emigration prior to the opening of the next significant stage of terminal evolution (known as Stage 3B).
- (ii) Process for determining need: The terminal planning review sought to achieve a design peak of 2,500 passengers per hour throughout the terminal by 2015. The first major stage of this was to be the expanded arrivals area and the second major stage was to be baggage reclaim, MAF, Customs and arrivals hall. Between these major projects, interim works were anticipated to provide capacity and appropriate service levels in the departure hall, emigration and forecourt areas
- (iii) Consumer engagement: The programme was included in the AAA price consultation and airlines and joint border agencies were identified as the key stakeholders to consult with during the design phase.
- (iv) Alternative projects considered: Not available at the time of pricing.
- (v) Extent reflected in pricing: The asset base was forecast to increase by \$17.1m between financial years 2008 to 2011.

- (vi) Constraints or contingent factors: The successful completion of these interim works was expected to depend upon the delivery of ITB Stage 3A and the timing of Stage 3B. As the works were anticipated in core operational areas and include the potential of moving the landside / airside boundaries, planning the successful completion of these interim works required a detailed programme to minimise disruption to operations and customer experience, and a close liaison with stakeholders, particularly border agencies. A key consideration influencing the scope and timing of terminal redevelopment and enhancement plans was the ability for projects to be delivered before the Rugby World Cup.

DTB Building Works

This project involved extending the existing domestic terminal to the east and redeveloping the central and western areas of the terminal in order to integrate the then standalone domestic terminal buildings.

- (i) Aims and objectives: The aims and objectives of this project were broadly to:
- expand the Air New Zealand end of the terminal to allow for projected growth through to 2015;
 - expand the baggage handling facility to cater for growth;
 - provide improved service levels in the facility provided to Air New Zealand, commuter airlines and the travelling public;
 - relieve passenger congestion and improve the check-in environment;
 - provide improved facilities for commuter airlines;
 - upgrade fire egress routes to the then current standards; and
 - create a retail and passenger facilitation area which joined the existing Air New Zealand and Qantas domestic terminals.
- (ii) Process for determining need: The “Auckland Airport Masterplan: 2005 and beyond” report was released in 2006. This indicated that the existing domestic terminal location was expected to remain until circa 2015, at which time operations would be transferred to a new location adjacent to the Northern Runway. This confirmed that a further ten years of life was needed from the facility. A concept study was initiated in 2005 with Air New Zealand to look to extend the life of the facility in a financially viable manner. This was followed by a development agreement between Auckland Airport and Air New Zealand to expand and enhance the domestic facility, and to ensure that other airline and tenant requirements were met.
- (iii) Consumer engagement: A series of meetings were held between Air New Zealand and Auckland Airport between June 2005 and the end of 2005 to develop and agree the project scope and a concept design brief using consultants sponsored by each party. A concept design was documented towards the end of the year as an outcome of these regular meetings. Air New Zealand was deeply involved in all aspects of the project and had its own project management representative involved in all aspects of the final design and construction.
- Other tenants were consulted from time to time on what their needs might be or as to how they might be affected. Auckland Airport’s retail division was involved in liaising with retail tenancies.
- (iv) Alternative projects considered: No high level alternatives were considered as the scope and brief was agreed by both parties. Regular project control group meetings were held to ensure that there were no unnecessary additions or extravagance.

- (v) Extent reflected in pricing: In the pricing model, it was forecast \$20.8m in incremental terminal assets would be commissioned during the 2008 financial year. This excluded the work done specifically for Air New Zealand as an owner or tenant solely for their use or on their ground lease areas, which was directly reimbursed by Air New Zealand. The revenue requirement was reduced by the amortised rental relating to \$10m of the capital expenditure.
- (vi) Constraints or contingent factors: It was anticipated that the most significant issue which could impact the development was undertaking the works in an operational environment whilst trying to minimise disruption for airlines and passengers. The nature of the work was complex and being undertaken within a facility built to outdated specifications.

Precinct Roothing and Services

This project involves the upgrade of roading, car parking and utilities in the international terminal precinct area to support growth in passenger numbers.

- (i) Aims and objectives: The aims and objectives of this project were to provide a roading network in the terminal precinct, i.e. that area west of George Bolt Memorial Drive, to meet the traffic and car parking demand for the initial development of the interim 2,000 passenger design busy hour international terminal.
- (ii) Process for determining need: Auckland Airport undertook a number of studies to assess the future configuration of the roading network within the airport boundaries. These included further developing the traffic model to incorporate the proposed Master Plan configuration and assessing options for the international terminal roading and passenger forecourt to meet the forecast demand. The traffic modelling was integrated into the overall traffic model developed for the entire airport. A key priority was to maintain the flexibility for a future domestic terminal immediately north of the international terminal, including a multi-modal transport centre, hotel, car parking buildings and a commercial area in the terminal precinct.

The Terminal Expansion Plan Study September 2005 proposed roading networks for each of the Dual, Twin and Single processor options to meet the forecast 2015 demand. Following the selection of the preferred Dual processor option, further studies and stakeholder consultation were undertaken to meet the interim 2,000 design passenger per hour demand. A staged configuration would assist to retain much of the existing terminal precinct roading. This project was the initial stage of this development.

Services corridors were provided for the underground services required to service the expanded terminal then and into the future.

- (iii) Consumer engagement: Extensive consultation was undertaken with the airlines, BARNZ, border agencies, police, taxi and public transport operators.
- (iv) Alternative projects considered: Throughout the development of the terminal precinct configuration, a number of different layouts were developed and priced. The preferred option was that which provided a separate loop road for each of the international and domestic terminals. The selected option was influenced by quite a wide range of factors including minimising the potential for traffic congestion, opening up the northern quadrant, providing access to a possible hotel, and getting people used to the new road network. This was the first step in transitioning to a major new arterial route layout including a realigned George Bolt Memorial Drive.
- (v) Extent reflected in pricing: In the pricing model, it \$11.8m of roading expenditure was forecast to be commissioned between financial years 2008 to 2012, being 75% of the estimated total expenditure.

- (vi) Constraints or contingent factors: The Terminal Precinct Rooding project is a long term project with multiple phases. The initial phases (the diversion of Ray Emery Drive, the reconfiguration of the short term car park and the reconfiguration of the ITB forecourt) were precipitated in part by the proposal to develop the next stage of the expanded arrivals project. The rooding programme design was based on the planning assumptions surrounding the future footprint of the terminal and the expectation that the expanded secondary processing would result in an expansion to the existing footprint, with a consequential impact on rooding.

Pier B Hardstand Stage 2 (Stand 19)

This project involves the provision of a replacement remote stand to compensate for the loss of stand 80.

- (i) Aim and objective: The aim and objective of this project was to provide an additional international aircraft stand due to the displacement of Stand 80 as a result of A380 operations at Pier B.
- (ii) Process for determining need: Irrespective of ongoing growth in international passengers and aircraft movements, stand 80 was planned to be de-commissioned to allow A380 aircraft to access existing Stands 15 and 16 on Pier B. A replacement aircraft stand was therefore required, and stand 19 was planned to be constructed immediately to the west of the existing stand 18.
- (iii) Consumer engagement: During the price consultation process BARNZ acknowledged the need for stand 19 to proceed as forecast by Auckland Airport under current projected growth.
- (iv) Alternative projects considered: The overall programme indicated hard stand options between Stand 19 and 26. Due to its location Stand 19 was expected to provide the greatest immediate utility.
- (v) Extent reflected in pricing: In the pricing model, \$8.4m of capital expenditure was forecast to be commissioned by the end of the financial year 2009, 100% of the estimated expenditure.
- (vi) Constraints or contingent factors: No project specific constraints were identified.

Engine run-up including part cross taxiway

This project was to provide an aircraft engine test facility with access provided by constructing a part of the proposed cross taxiway.

- (i) Aim and objective: The aim and objective of this project was to provide a dedicated heavy aircraft engine run-up facility to support the maintenance requirements of airlines.
- (ii) Process for determining need: Auckland Airport holds consents for engine run-up testing as part of an overall noise allocation consent. In early 2000, ongoing maintenance engine testing was increasing and pushing the upper limits of these consents. In addition, locations available to undertake this testing in amongst routine airfield operations were becoming an operational challenge. Auckland Airport undertook studies to provide a dedicated engine run-up testing facility to alleviate both these concerns - a key report being the Auckland Airport Engine Run-up Facility Study report by Beca dated November 2005.
- (iii) Consumer engagement: Auckland Airport consulted with BARNZ and Air New Zealand in early 2006, obtaining engine testing requirements and comments on options for siting the facility. Absent a dedicated area, the operational solution involved identification of available pavement on the day. During the price consultation process the capital expenditure project was pushed out to financial year 2010.

- (iv) Alternative projects considered: Studies undertaken to plan the facility looked at many options for locations for the engine run-up testing facility. These ranged from the south side of the main runway, to future northern locations. The selected position was a medium term option that utilised taxiway pavements required for long term aircraft operations, and noise and jet-blast attenuation structures that could be relocated to a future location if required.
- (v) Extent reflected in pricing: In the pricing model, \$8.1m of capital expenditure was forecast to be commissioned by the end of the financial year 2010. This was 100% of the estimated expenditure.
- (vi) Constraints or contingent factors: The project was contingent on there being no reduction in the actual engine testing undertaken at Auckland Airport or the need to undertake full power testing. The proposed timing was contingent upon the runway cross taxiway being constructed to provide access before the engine run up element of the project commenced. The actual timing of the project was dependent upon the priority associated with the project given demand and future operational service levels.

Noise Prevention

This project involves acoustic treatment to nearby houses and schools.

- (i) Aims and objectives: The aims and objectives of the acoustic treatment programme were to give effect to legal requirements arising from the operational District Plan, intended to mitigate against the noise impact of airport operations on affected housing and schools.

In particular, Auckland Airport is obliged under the District Plan to offer owners of existing noise sensitive activities ("**ASANS**"), such as houses and schools, acoustic treatment when the noise levels at the property boundary reach a specified level.

- (ii) Process for determining need: The Acoustic Treatment programme was triggered by the consent conditions outlined in the Environment Court decision for the approval of the Northern Runway. Auckland Airport is obliged under the District Plan to offer owners of existing ASANS (built prior to 10 December 2001) in nominated areas acoustic treatment when the noise levels at the property boundary reaches a specified level based on surveyed Annual Aircraft Noise Contours ("**AANCs**"). The AANCs are a projection of aircraft noise for the coming 12 months for the purpose of identifying properties which are eligible to receive an offer for sound insulation treatment. The AANCs move depending on whether aircraft noise increases or decreases in any year. As aircraft noise increases, the AANCs will extend further into the community.
- (iii) Consumer engagement: There was a three year consultation period with the community involving Air New Zealand and BARNZ, Airways, Ministry of Education, Housing NZ and the Manukau City Council, which was undertaken as part of a long consenting process. Ultimately what was agreed by all parties became Designation 231 of the Manukau District Plan.
- (iv) Alternative projects considered: The most effective way to reduce noise of aircraft in homes is to keep the doors and windows shut. A pilot study to test several alternatives was undertaken. Packages were developed to allow homeowners to keep their doors and windows shut by installing a ventilation system to bring fresh air in and a kitchen rangehood to remove cooking odours. Ceiling insulation is also installed to minimise noise. The package is designed for homeowners to replicate daily living with doors and windows open. Once the pilot study for the acoustic treatment programme was complete, the design of the package was agreed to best suit the outcome and legislative requirements of the Manukau District Plan. All requirements that Auckland Airport are obliged to carry out are set out in the Manukau District Plan as a result of the Environment Court decision.

- (v) Extent reflected in pricing: Between financial years 2008 and 2012, \$5.2m of capital expenditure was added to the asset base in the pricing model, representing 50% of the total forecast expenditure.
- (vi) Constraints or contingent factors: The noise contours are set to 2030 and the capital expenditure programme will be completed once all ASANS in the noise contour areas have been offered an acoustic treatment package. This is done on a year to year basis with offers open for a twelve month period. The actual level of expenditure is contingent on the actual take-up of offers by affected parties.

2.5 Forecast operational expenditure - clause 2.5(1)(g)

Clause 2.5(1)(g) requires Auckland Airport to publicly disclose any assumptions or justifications of Auckland Airport's forecast operational expenditure by category as disclosed in accordance with Schedule 18.

Auckland Airport did not prepare its forecasts for the previous pricing consultation according to the categories prescribed in Schedule 18 of the Determination. As a result, Auckland Airport is only able to provide its total forecast operational expenditure and has therefore sought and received an exemption for clause 2.5(1)(g) from disclosing its forecast operational expenditure in accordance with these categories.

Nevertheless, Auckland Airport has disclosed its total forecast operational expenditure in Schedule 18. Auckland Airport's approach to determining its forecast operating expenditure for the purpose of the previous price setting event is described above at Section 2.2.3.

2.5.1 Assumptions and justifications for total forecast operational expenditure

Key assumptions for forecasting operational expenditure are summarised as follows:

- The general approach is to zero base real costs based on the 2007 financial year with nominal inflation over the time period forecast to be 2.4% per annum on average;
- The key driver of occupancy costs were expected increments in space, with square metre increments forecast for Pier B and Expanded Arrivals based on design estimates and expected commissioning dates;
- Insurance premiums to increase due to additional coverage costs from new capital expenditure;
- Utility costs forecast to increase 5% in real terms and in line with growth in terminal areas;
- Rates price growth of 7.6% per annum on average, in line with the Manukau City Council total rates projection;
- Staff costs forecast to increase in real terms by 1.0% plus 2-4% for the gradual introduction of Kiwisaver; and
- Identified incremental FTE requirements (three staff in Pier B, 9 security officers and operational staff).

Specific adjustments made for the purposes of price setting were to:

- Defer the recovery of the annual noise trust costs (\$250k) to September 2007 until September 2010 and at that stage include only 50% of the total capital and operating noise costs in the forecast.
- Remove the aeronautical pricing consultation costs from the 2007 financial year baseline and subsequent years.

Auckland Airport undertook time series analysis and airport comparisons to assess its baseline costs. Analysis of the 2001 – 2006 aeronautical operating costs indicated a declining cost per passenger.

Auckland Airport also compared itself to other New Zealand airports and global players both at a total level and within key cost areas. The benchmarking analysis indicated that diseconomies could occur as scale increased and that international operations provided greater complexity than domestic operations. Auckland Airport sought feedback from substantial customers on areas they perceived that operational cost improvement could be realised.

As a final sense check the cost forecast per movement and passenger was reviewed to seek a reducing real cost per unit profile over time.

2.6 Pricing methodology - clauses 2.5(2)(a)-(c)

2.6.1 Summary of pricing methodology - clause 2.5(2)(a)

As discussed in Section 2.1 above the pricing methodology was based on a building blocks approach. The actual charges were estimated using an excel-based model which reflected both the economic principles recommended by Auckland Airports' expert advisors and adjustments made through the consultation. Specific components of the pricing methodology in relation to charged services are explained in the following sections.

The overarching rationale was to earn a normal return calculated using an appropriately determined WACC, an appropriate asset base and efficient operating costs. Key principles were that the resulting charges should be reasonable and Auckland Airport should act responsibly having regard to the AAA, and adopt a meaningful and transparent consultative approach. A normal return was considered to involve an assessment over time, the potential to include gains or losses in individual years based on a prospective NPV=0 concept, and with no monopoly rents. The allocation methodologies reflected the principles that all charges should at a minimum cover the directly attributable costs of the relevant service; all other costs should be recovered having regard to Ramsey pricing principles; and that a multi-till approach should be taken.

2.6.2 Description of Charged Services - clause 2.5(2)(b)(i)

Auckland Airport's charged services consulted on in respect of the 2007 price setting event for which standard charges apply are:

- Airfield landing charges and parking charges;
- Passenger services charges; and
- Terminal service charges

The table below summarises the composite revenue requirements:

	2008	2009	2010	2011	2012
	\$000s	\$000s	\$000s	\$000s	\$000s
<i>Airfield</i>					
Landing and parking charges	69,300	73,782	78,517	83,891	90,836
<i>Specified Terminal</i>					
Passenger services charge	66,346	71,491	77,161	83,628	87,944
Terminal services charges	21,955	26,156	27,014	27,381	27,457
Total Required Revenue	157,601	171,429	182,692	194,900	206,237

Airfield landing and parking charges are for the facilities and operational costs associated with:

- Runway and taxiways;
- Aprons including stands and aircraft manoeuvring areas;
- Airside safety services;
- Airport fire services;
- Asset management of airfield services including planning and repairs and maintenance;
- Share of common costs associated with corporate wide functions (e.g. corporate, accounting and finance, human resources, information technology and shared aeronautical functions); and
- Airfield share of infrastructure including the storm water network and access roads.

Airfield landing charges are charged on the basis of an aircraft's maximum certificated take-off weight ("**MCTOW**"). Aircraft parking charges are based on hourly rates by size and duration where applicable. Auckland Airport's practice is not to charge for parking, as the administration costs outweigh the benefits. Nevertheless this charged service has been maintained within the standard charges, not as a material revenue forecast item, but to be used if needed to deal with inefficient use of resources.

Passenger services charges cover the facilities and operational costs associated with:

- Check in, congregation and circulation areas for passengers and visitors, operational areas for aviation security and Customs operational space;
- Secure airside areas for passengers following security screening;
- Stairs and fire egresses;
- Terminal systems required for processing or administration of passengers including security, flight display system, public address system, building fire system, closed circuit television system and communication systems;
- Building infrastructure and plant;
- Operations staffing and management to facilitate effective daily operation of the terminal building and interaction with airlines;
- Asset management of terminal services including planning and repairs and maintenance; and
- Share of common costs associated with corporate wide functions (e.g. CEO and board, accounting and finance, human resources, information technology and shared aeronautical functions (e.g. aeronautical leadership team)).

Terminal services charges for the facilities and operational costs associated with:

- Particular airside areas including baggage make-up areas, baggage claim areas, breezeway, toilets, gate lounges, corridors, conveyor areas outside baggage halls, baggage collection area;
- Plant including busses, airbridges, nose-in guidance, ground power units, baggage systems and airbridges; and
- Operating costs associated with these areas and plant and equipment.

2.6.3 Description of relationship between quality of service and cost for each Charged Service - clause 2.5(2)(b)(ii)

There is limited differentiation in the price charged for each service or in the quality of services offered given the general common user environment. Service quality is measured based on customer feedback, periodic adhoc surveys and quarterly, independent, Airport Council International ("**ACI**") Airport Service Quality ("**ASQ**") surveys, as well as airport benchmarking. In addition to customer service, safety and security are core considerations. Therefore while the quality of service is actively monitored, the published charges provide for a common user environment, with no specific quality differential.

The exception to this is within the terminal service charge where the charging mechanism adjusts for terminal access options of bussing or use of an airbridge, which is a key service differentiator. Otherwise, where a customer has additional service level demands to the common user requirements, these are met through specific leasing arrangements with those customers. Examples include dedicated check-in areas, VIP check-in areas and VIP lounges.

2.6.4 Description of methodology used to allocate costs to particular Charged Services - clause 2.5(2)(b)(iii)

In the price setting process, Auckland Airport proposed to have only two general charges, landing charges and passenger services charges, and to remove the terminal service charge (which was ultimately retained). The process of allocation of assets and costs to charged services created separate building blocks information for airfield services and passenger terminal services.

Costs were allocated to airfield and terminal based on proxies for use (e.g. storm water costs were allocated on the share of sealed surfaces). Where there were costs that were common to airfield and passenger terminal services, these were split 50:50.

For the airfield building block analysis, standard charges were estimated net of other airfield income.

For the terminal building blocks analysis, standard charges were estimated net of the forecast revenues associated with terminal service charges and counter user licenses. The scope of terminal assets and operating costs excluded identified tenancies.

The broad principles of asset and cost allocation processes are provided in the comments in section 2.2.1 (asset allocation) and section 2.2.3 (cost allocation) above. Specific asset allocation adjustments were as follows:

Asset allocation - airfield	Asset allocation - terminal
Seabed and Wiroa Island were removed.	Identified tenancies removed.
Northern airfield land temporarily reduced by 44%.	Share ITB public space on the first and second floors and remove retail curtilage with tenant access treated as common, resulting in an average allocation of approximately 60% over the forecast period.
Northern airfield restricted areas temporarily reduced by 72%.	Main access roads varying depending on the primary beneficiary analysis.
The allocation of approach land was reduced from 100% to 50%.	

2.6.5 Description of significant changes to, or rebalancing of from the previous pricing period - clause 2.5(2)(b)(iv)

There were no significant changes to, or rebalancing of, prices from the previous pricing period other than a name change for the previously applicable Airport Development Charge (or "ADC") to the new Passenger Service Charge (or "PSC") collected by the airlines via the airline ticket rather than directly from international passengers departing Auckland Airport.

2.6.6 Description of methodology for determining pricing for Charged Services and how these were reconciled with forecast revenue requirement - clause 2.5(2)(b)(v)

Auckland Airport established its forecast revenue requirement and consequent prices required from consideration of the forecast financial outcomes separately for the Airfield and Terminal (non-leased) airport activities. This involved the following steps:

Airfield

1. The actual net prices for international and domestic aircraft earned for the 2006 financial year (the last remaining full year results available at that time) were identified. The actual net prices achieved were slightly below the published prices due to non-recovery of full charges in a small number of instances.
2. The actual net prices were increased by smoothed annual percentage increases.
3. Forecast required revenue was determined by multiplying the new price path by forecast traffic volumes.
4. Total forecast revenue was determined by adding annual income from other sources to required revenue.
5. The economic surplus/deficit was calculated using the building block model.
6. Acceptability of the NPV outcomes was considered within the WACC range recommended by its expert adviser.
7. From this process Auckland Airport determined an annual 2.5% increase in net prices which produced NPV estimates in the model of negative \$31.6m to positive \$15.3m for the WACC range over the pricing period, after a reduction of \$99m for the 2006 revaluation effect, made by Auckland Airport as a result of the consultation process.⁴
8. The 2.5% annual increase was then applied to the MCTOW and parking charges for aircraft weighing more than 6 tonne in the published schedule of prices effective immediately before the new pricing period. A flat charge was introduced for landing and parking charges for aircraft under 6 tonnes of \$50 per landing, plus \$100 per hour for every hour of parking in excess of six hours.

Terminal

1. For the base year the charge per arriving and departing international passenger and applicable net chargeable passengers were determined.
2. Smoothed annual increases in prices were considered.
3. Forecast required revenue was determined by multiplying the new price path by forecast passenger volumes for those passengers subject to the Passenger Service Charge.
4. Total forecast revenue was determined by adding annual income from other sources to required revenue. This included revenue from the Terminal Service Charge which is subject to a separate commercial arrangement with the airlines.
5. The economic surplus/deficit was calculated using the building block model.
6. Acceptability of the NPV outcomes was considered within the WACC range recommended by its expert adviser.
7. From this process Auckland Airport determined an annual 50c increase (inclusive of GST at the 12.5% rate applicable at the time) in the charge per passenger, until 2011, which produced NPV estimates of negative \$18.9m to positive \$11.8m, for the WACC range over the pricing period after a reduction of the \$7.5m referred to as the ADC wash-up in 2.2.7.⁵

⁴ The point estimate was negative \$8.7m using the mid-point WACC.

⁵ The point estimate was negative \$3.97m using the mid-point WACC.

2.6.7 Description of terminal access charges - clause 2.5(2)(b)(vi)

The terminal access charges are included in the Terminal Services Charge. Each year an analysis is undertaken within the international terminal for the number of landings from which passengers are bussed or processes via an airbridge. Within the Terminal Services Charge a \$1.4m adjustment is made annually between airbridged and bussed services operating costs. This had the effect of reducing the average charge per bussed service, versus airbridged services.

2.6.8 Explanation of the extent to which Auckland Airport's pricing methodology will lead to efficient prices including whether there are any cross subsidies - clause 2.5(2)(c)

The prices established by Auckland Airport for the previous consultation period arose from application of the building block model that sought to achieve an NPV approximating zero for the airfield and terminal airport activities. In practice a number of adjustments were made in order to achieve smoothed charges.

Auckland Airport considers that its pricing methodology fully implements the pricing philosophy referred to in Section 2.2 above, and therefore leads to efficient prices.

At the service level, individual prices reflect the key cost drivers: MCTOW based charges for landing, terminal charges reflecting passenger numbers, and lease charges based on market or cost for specific space and plant.

Each service was priced at or above its forecast directly attributable cost, to recover different portions of common costs. No cross-subsidies were forecast in the charges. The introduction of a domestic passenger charge was considered, but rejected based on airline feedback during the consultation process.

2.6.9 Standard prices for price setting event 1 September 2007

Auckland Airport's list of standard prices for the price setting event 1 September 2007 is attached in Appendix E.

3. Schedule 19 Report on Demand Forecasts

			Regulated Airport											
			Pricing Period Starting Year Ended		Auckland Airport									
			30 June 2008		30 June 2008									
SCHEDULE 19: REPORT ON DEMAND FORECASTS														
ref	19a: Passenger terminal demand													
6														
7	(000s)													
8	for year ended													
9			Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10		
10			30 Jun 08	30 Jun 09	30 Jun 10	30 Jun 11	30 Jun 12	30 Jun 13	30 Jun 14	30 Jun 15	30 Jun 16	30 Jun 17		
9	Busy hour passenger numbers	Inbound passengers	Domestic							1,259				
10			International	1,919	1,993	2,069	2,146	2,230	2,315	2,404	2,495	2,590	2,689	
11			Combined *											
12	Outbound passengers	Domestic								1,249				
13			International	1,859	1,930	2,004	2,080	2,159	2,241	2,326	2,414	2,505	2,600	
14			Combined *											
15	* No disclosure of combined terminal forecasts is required for airports with no shared passenger terminal functional components.													
16	Number of passengers during year	Inbound passengers	Domestic	2,590	2,681	2,819	2,958	3,104						
17			International	3,743	3,888	4,040	4,222	4,440						
18			Total	6,333	6,568	6,859	7,180	7,544	-	-	-	-	-	
19	Outbound passengers	Domestic	2,590	2,681	2,819	2,958	3,104							
20			International	3,764	3,910	4,064	4,247	4,466						
21			Total	6,354	6,591	6,883	7,205	7,570	-	-	-	-	-	
22		International transit and transfer passengers [†]	947	984	1,022	1,068	1,122							
23	† NB. Forecasts of international transit and transfer passenger numbers relate only to airports with extant or planned international transit and transfer facilities													
24														
25														
26														
27														

Regulated Airport
Pricing Period Starting Year Ended

Auckland Airport
30 June 2008

SCHEDULE 19: REPORT ON DEMAND FORECASTS (cont)

ref			Year 1 30 Jun 08	Year 2 30 Jun 09	Year 3 30 Jun 10	Year 4 30 Jun 11	Year 5 30 Jun 12	Year 6 30 Jun 13	Year 7 30 Jun 14	Year 8 30 Jun 15	Year 9 30 Jun 16	Year 10 30 Jun 17
34	19b: Aircraft Runway Movements											
35		(000)										
36												
37	Movements during	During the runway busy hour										
38	busy period (total	During the runway busy day								45		
39	number of aircraft)											
40	Landings during year	Aircraft 30 tonnes MCTOW or more	39.26	40.78	42.08	43.90	45.98					
41	(total number of	Aircraft 3 tonnes or more but less than 30 tonnes MCTOW	36.40	37.46	39.53	41.39	43.34					
42	aircraft)	Aircraft less than 3 tonnes MCTOW	2.62	2.71	2.84	2.98	3.12					
43		Total	78.28	80.95	84.45	88.26	92.44	-	-	-	-	-
44			-	-	-	-	-					
45	Landings during year	Aircraft 30 tonnes MCTOW or more	5.45	5.63	5.85	6.09	6.43					
46	(total MCTOW in	Aircraft 3 tonnes or more but less than 30 tonnes MCTOW	0.42	0.44	0.46	0.48	0.51					
47	tonnes)	Aircraft less than 3 tonnes MCTOW	0.01	0.01	0.01	0.01	0.01					
48		Total	5.88	6.08	6.31	6.58	6.95	-	-	-	-	-
49			-	-	-	-	-					
50	Landings during year	Air passenger services—international	19.34	20.28	20.51	21.28	22.25					
51	(total number of	Air passenger services—domestic	53.11	54.66	57.63	60.38	63.28					
52	aircraft)	Other aircraft	5.83	6.01	6.31	6.61	6.92					
53			-	-	-	-	-					
54	Landings during year	Air passenger services—international	4.12	4.24	4.40	4.57	4.83					
55	(total MCTOW in	Air passenger services—domestic	1.60	1.67	1.74	1.84	1.93					
56	tonnes)	Other aircraft	0.16	0.17	0.17	0.18	0.19					
57	Description of the basis for forecasts, and/or assumptions made in forecasting											
58	Refer to Section 4											
72												

4. Disclosure relating to Demand Forecasts

The Commission has granted Auckland Airport an exemption from the disclosure of all demand forecasts for financial years 2013 to 2017 (with the exceptions as described below).

4.1 Schedule 19a: Passenger Terminal Demand

4.1.1 Basis for forecasts and/or assumptions made in forecasting

Busy hour

Future busy hour facility requirements were comprehensively reviewed by Beca, Stephenson and Turner and Landrum and Brown Worldwide Services in a report commissioned by Auckland Airport provided in September 2005 and titled "Terminal Expansion Plan Study Forecast and Facility Requirements 2006-2025" ("**TEPS Report**").

The TEPS Report provided arrival and departures peak hour forecasts for 2015 and 2025 for both international and domestic terminals. The peak hour passenger forecasts were based on the historical (2004) and forecast "peaking ratios".⁶ The historical peaking ratios were determined from historical busy hour passenger numbers and were based on the International Air Transport Association ("**IATA**") methodology (second busiest day of the average week of the peak month). Future peaking ratios were extrapolated from the historical peaking ratio trends. The peaking ratios were then applied to the forecast total annual passenger numbers. This provided annual forecasts of peak hour demand for arrivals and departures by year.

Landrum and Brown Worldwide Services provided an updated report for international terminal planning in August 2007: "ITB Review of Design Peak Hour Passenger Forecasts – Addendum to Final report August 2007" ("**Landrum and Brown 2007 report**"). This used updated information for the financial years 2004 to 2007 and considered the 2006 one way international busy hour passenger forecast of 1840 for arrivals and 1770 for departures (excluding transit and transfers) to be the appropriate base for projecting a forecast.

Number of passengers

Auckland Airport commissioned Tourism Futures International to develop domestic and international passenger volume forecasts to be consulted on during the AAA price consultation process. These forecasts involved a review of factors likely to influence demand by country and supply side factors likely to impact price and demand. The forecasts in the price model, shown in Schedule 19a, were based on the Tourism Futures International report and updated during consultation based on small changes to the current year forecast and outlook.

⁶ A peaking factor or ratio is the ratio of busy hour activity to annual activity levels.

4.1.2 Explanatory notes for Schedule 19a

Busy hour passenger numbers - domestic

The domestic busy hour passenger forecasts shown in Schedule 19a were sourced from the TEPS Report September 2005. This report contained demand forecasts for 2015 and 2025, but not the interim years. Auckland Airport has therefore provided the forecast information for 2015 in the Schedule 19 disclosure. An exemption has been provided by the Commission for the domestic busy hour passenger forecasts for all other financial years.

Busy hour passenger numbers - international

The international busy hour passenger forecasts shown in Schedule 19a were sourced from the Landrum and Brown 2007 report. This contained a low, medium and high growth forecast and interpolated the busy hour figures for all years. The figures in Schedule 19a represent the medium growth trajectory. The base year for projection was a matter of professional judgement at the time. Between 2006 and 2007 there had been a significant reduction in busy hour arrivals. BARNZ considered the more recent 2007 one way busy hour should be used for forecasting purposes. However Landrum and Brown considered the change to be temporary and based their forecast on the 2006 one way busy hour.

Number of passengers during year - domestic

The forecast annual domestic figures prepared by Tourism Futures International were aggregate and not split between inbound and outbound as required by Schedule 19 of the Information Disclosure Determination.⁷ Further, the forecast passenger numbers in the 2007 price setting event were established for a five year period and not the ten year period required to be disclosed in Schedule 19. Auckland Airport has been granted an exemption from disclosing financial years 2013 to 2017, but is able to provide information for the financial years 2008 to 2012. To allow Auckland Airport to present the forecast information for the five year period, the Commission has indicated in its guidance that it is acceptable for Auckland Airport to adopt a practical approach of evenly dividing its domestic passenger forecasts and allocating half the total amount to inbound, and half the total amount to outbound.

4.2 Schedule 19b: Aircraft Runway Movements

4.2.1 Basis for forecasts and/or assumptions made in forecasting

Busy hour

At the time of the price setting event, the most recent forecast of busy hour aircraft movements was contained in the Airbiz Aviation Strategies Limited (**Airbiz**) "Master Planning Executive Report", November 2005 ("**Airbiz Master Planning 2005 report**"). Masterplanning was based around medium and long term planning horizons.

⁷ For the avoidance of doubt, unlike the forecast number of domestic passenger information, the forecast number of international passengers information is in a form which has allowed Auckland Airport to complete the inbound and outbound categories without the need for an exemption.

The basis for this forecast was to initially determine the 30th ranked busy hour of runway movements for the 2004 year as a base. This was then forecast from the base level at the rate of overall annual aircraft growth, factoring in some international peaking. The report documented the forecasts for 2025 and 2055.

Number of landings and MCTOW

Auckland Airport commissioned Airbiz to develop annual MCTOW and aircraft movement forecasts to be consulted on during the AAA price consultation process. A key input into these forecasts was the passenger demand forecasts for the corresponding periods provided by Tourism Futures International. Further considerations were expected developments in air services, routing and airline fleet intentions. The forecasts in the price model, shown in Schedule 19b, were based on the Airbiz reports and updated during consultation based on small changes to the current year forecast and outlook.

4.2.2 Explanatory notes for Schedule 19b

Busy hour - runway

The busy hour of aircraft movements was contained in the Airbiz Master Planning 2005 report. For the purposes of Schedule 19b an interpolation has been made to provide a 2015 forecast.

Number of landings and MCTOW - weight break analysis

The Airbiz forecast of landings and MCTOW included weight break categories which do not exactly match the aircraft weight break categories prescribed for the disclosure of "landings during year (total number of aircraft)" and "landings during year (total MCTOW in tonnes)" in Schedule 19. The weight break categories the consultants used were based on the following distinctions:

- International
 - Category 4 (40000kg+)
 - A380
- Domestic
 - Category 1 (0-2999kg)
 - Category 2 (3000 – 5999kg)
 - Category 3 (6000 – 39999kg)
 - Category 4 (40000 kg+)
 - Non scheduled

Airbiz and Auckland Airport have reviewed the models used at the time of the price consultation and reclassified the forecast movements and MCTOW in the pricing model into the weight breaks in Schedule 19 based on the detailed information within the Airbiz aircraft forecast model. It is noted that the report was based on movements, which are equivalent to one landing.

Number of landings and MCTOW - air passenger service analysis

The Airbiz forecast of landings and MCTOW was not broken down into “air passenger services—international”, “air passenger services—domestic” and “other aircraft” as required by the subsequently established Schedule 19. Instead, the Airbiz report was based on the following:

- International
 - Scheduled
 - Non scheduled
- Domestic
 - Scheduled
 - Non scheduled

However, we have been informed by Airbiz that the “Scheduled” data provided in its report can be reliably used for the disclosure of “air passenger services” because Airbiz has confirmed that this data does not include freight, military and commercial flight data (which was analysed separately under the “non-scheduled” category). There may be unscheduled charter flights which would fall under the definition of “air passenger services” that may not have been included in the “Scheduled” data, however Airbiz’s view is that the inclusion of these flights in the disclosure would not make the information materially different from the information provided in its report.

Auckland Airport has therefore completed the disclosure of data relating to aircraft runway movements on this basis.