



**Submission on Commerce Commission  
Process and Issues Paper for its review of  
Auckland Airport's 2022 – 2027 price setting event**

**31 January 2024**

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## 1. Introduction

The Commerce Commission (“**Commission**”) has commenced its review of Auckland Airport’s fourth price setting event, covering prices for the July 2022 – June 2027 period (“**PSE4**”). In this submission, Auckland Airport:

- endorses NZ Airports’ views on the proposed scope of the review;
- explains the impact of information disclosure regulation on its pricing decision; and
- responds to the topic areas in the Commission’s process and issues paper (“**Issues Paper**”) including providing Auckland Airport’s views on the approach to assessing its performance for each topic area.

This submission should be read alongside Auckland Airport’s price setting disclosure for PSE4 (“**PSE4 PSD**”), published on 17 August 2023. The price setting disclosure provides an overview of Auckland Airport’s pricing decision, supporting rationale, and relevant information and forecasts. This submission should also be read alongside the submission from the NZ Airports Association on the Commission’s review, which Auckland Airport is a party to and supports.

## 2. Executive Summary

Auckland Airport welcomes this section 53B review which follows the pricing decision for PSE4. These reviews play an important role in the information disclosure (“ID”) regulatory framework for airports in New Zealand.

*Promoting the long-term benefit of consumers is the purpose of this review*

Auckland Airport considers that the regulatory framework has been carefully and deliberately designed to ensure that airports are incentivised to make decisions that are aligned to the interests of the New Zealand community. The regulatory framework achieves this by ensuring airports have incentives to innovate and invest, provide services that are efficient and at a quality that customers expect, set prices that deliver a reasonable and fair return on investment, and shares the benefits of these outcomes with consumers. In the case of airports, the achievement of these outcomes is all interrelated and each are not mutually exclusive - the interdependencies between these outcomes can be complex.

Accordingly, Auckland Airport makes its decisions with a wholistic view and is materially guided by both the ID regime and the overall purpose of Part 4 of the Commerce Act 1986 (“**Part 4**”), which is to promote the long-term benefit of consumers.

*The approach to this review should take a wholistic approach to consider if the Part 4 purpose is being promoted*

Taking a wholistic view of the issues and the purpose of Part 4 is necessary to give appropriate consideration as to whether the purpose of Part 4 is being achieved. As the Commission approaches this review to assess Auckland Airport’s performance, Auckland Airport considers that consistent with the purpose of Part 4 the review can achieve this by:

- considering all of the information published under the ID regime to determine whether the overall purpose of Part 4 is being met;
- assessing individual areas of performance not in isolation, but in the overall context of the Part 4 purpose;
- considering in its assessment the expected impacts on consumers including the price of airfares paid by passengers;
- taking into account the specific circumstances that apply to Auckland Airport when assessing this pricing decision; and
- only considering information that was available at the time of setting prices.

Profitability is only one of the four areas of assessment that is included in the purpose statement of Part 4 of the Commerce Act. As set out above, Auckland Airport considers all four areas to be equally important, and that Part 4 is best met when its overall purpose is considered, all four areas are considered in their entirety, and the interlinkages between different areas are considered.

*Principled approach taken to accurately estimate the cost of capital*

There are two material reasons why it was necessary that Auckland Airport estimated its cost of capital for PSE4 as accurately as possible. These are:

- **that a step-change in aeronautical investment is required at Auckland Airport** - following an extensive process of planning, development, and consultation it has been determined that Auckland Airport requires a significant increase in aeronautical investment. This has resulted in a forecast of \$6.7 billion of capital investment in aeronautical assets planned over a 10-year period; and
- **the pandemic demonstrated the true risk of airport activities** - border closures and lockdowns caused air travel out of Auckland to all but cease, causing Auckland Airport revenues in PSE3 to be more than \$500 million lower than was forecast at the time of setting prices – this event revealed the real risks faced by airports.

Accordingly, setting the target return for PSE4 needed to ensure that the incentives to invest in the infrastructure required at Auckland were maintained, while ensuring that targeted profitability remained appropriate. The intention was to find the right balance, so that the overall the purpose of Part 4 continued to be promoted.

Auckland Airport considered that the most appropriate way to do this was to ensure that the cost of capital was informed by the most up to date and recent information, in a way that was consistent with

the regulatory precedent that had been set in the 2016 IMs where it was appropriate to do so. This was done by following a robust and logical process to determine an appropriate cost of capital at the beginning of the PSE4 pricing period. This process reached the following key conclusions:

- updating the 2016 Input Methodology (“**IM**”) comparator airport data to estimate asset beta at the start of the PSE4 pricing period (0.80) showed that the estimate had increased materially from the estimate in 2016 (0.65) - given the materiality of this input parameter this demonstrated that the outputs of the 2016 IM were out of date;
- given that the various economic shocks that can impact on estimates of asset beta, it is impossible to accurately forecast and adjust for these shocks. The most accurate and principled way to estimate asset beta over the long-run is to update the inputs for each pricing decision based on the latest available information to ensure it is weighted evenly over time;
- regulatory precedent to apply adjustments for the impacts of the COVID-19 pandemic provided greater compensation for risk to airports compared to the approach adopted by Auckland Airport to not make any pandemic related adjustments; and
- all conceptual and empirical analysis presented through consultation supported no longer applying 5 basis points downward adjustment to asset beta to adjust for aeronautical risk.

Auckland Airport considered these findings and adopted what it considered to be the most principled and objective approach, which was to update the input parameters at the start of the pricing period, which arrived at a mid-point post-tax weighted average cost of capital (“**WACC**”) of 8.73%. Auckland Airport considers this approach appropriately balanced the need to maintain incentives to invest in the aeronautical infrastructure that Auckland Airport requires, while keeping profitability at an appropriate level, outcomes that are consistent with the purpose of Part 4.

#### *Thorough and robust planning processes identify need for material increase in capital investment*

Auckland Airport has plans to invest \$6.7 billion in aeronautical assets over the 10 years to June 2032. This capital investment plan has been developed over an extended period of time, subject to extensive analysis, planning, consultation and feedback from airline customers. Having completed this analysis and undertaken these processes, this investment plan is the one that Auckland Airport considers best meets the needs of passengers, consumers, users of the airport, and the New Zealand economy.

Auckland Airport considers that it is best placed to make these investment decisions which involve great complexity. The Commission should take comfort that the right investment decisions are being made, supported by these robust processes combined with the carefully calibrated ID regime for airports, which aligns Auckland Airport’s incentives to invest with the long-term benefit of consumers, which results in investment levels that are appropriate and timely.

#### *Steps taken to deliver outcomes consistent with the intent of the regulatory model*

The regulatory framework for airports was not designed with the disruption caused by the pandemic in mind given the uncertainty it created. To deal with the uncertainty presented by the pandemic, Auckland Airport presented a proposal to airlines which set out that the PSE4 pricing decisions be delayed by 12 months, a proposal that was accepted by Air New Zealand and the Board of Airline Representatives New Zealand (“**BARNZ**”).

The intent of this proposal was to avoid volatile or highly uncertain forecasts being adopted to determine aeronautical prices, and to allow more time for certainty to return to enable robust forecasts on which to base aeronautical prices. While forecasts were still undertaken with a highly uncertain outlook by normal standards, this objective was achieved and introduced greater certainty into the price setting process.

Auckland Airport also recognised that the significant capital expenditure programme created increased capital delivery risk. Therefore, it proposed the capital expenditure (“**capex**”) wash-up mechanism in order to ensure that Auckland Airport would not benefit in the event of under delivery. The one-way nature of the mechanism ensures that Auckland Airport continues to have the right incentives to deliver projects efficiently and cost effectively. Auckland Airport considers the Commission should take comfort in the introduction of the capex wash-up when assessing the reasonableness of its capital investment forecasts.

*This submission demonstrates that the PSE4 pricing decision is consistent with the purpose of Part 4*

This submission builds on the information released in Auckland Airport's PSE4 PSD. In section 3 Auckland Airport responds to the process proposed by the Commission for this review, and also comments on what it considers to be this review's purpose.

In section 4 Auckland Airport responds to the specific questions that were outlined in the Issues Paper, building on the information that has already been released in Auckland Airport's PSE4 PSD.

### 3. Considering the purpose and approach of this section 53B review

Auckland Airport endorses NZ Airports Association’s submission points on the regulatory framework for airports, and broadly agrees with how the Commission describes the regulatory framework in its Issues Paper.

Auckland Airport takes the view it is important to consider the purpose of both Part 4 of the Commerce Act more broadly, and the purpose specifically of this section 53B review in achieving the Part 4 purpose. Auckland Airport also provides its views on the approach proposed by the Commission for this review and emphasise certain requirements in relation to the Commission’s specific obligation under section 53B to publish a summary and analysis of the information disclosed by Auckland Airport in accordance with its ID requirements.

#### 3.1. The purpose of a section 53B review

The purpose of a section 53B review is to promote a greater understanding of Auckland Airport’s performance, which can inform an assessment of whether Auckland Airport’s performance consistent with the purpose of Part 4.

#### Purpose of the review is limited to promoting a greater understanding of performance

The Commission recognises that:

- the purpose of the summary and analysis in a section 53B review is to promote greater understanding of the performance of individual regulated suppliers, their relative performance, and the changes in performance over time;<sup>1</sup> and
- this review enables an assessment of whether the expected outcomes of Auckland Airport’s pricing decisions are consistent with the Part 4 purpose statement.<sup>2</sup>

The purpose of the review is, accordingly, not about the appropriateness of information disclosure regulation, but assessing Auckland Airport’s performance and how it meets the purpose of Part 4. Auckland Airport considers that the ID regime is effective in allowing interested persons to assess whether the Part 4 purpose is being met.

#### The purpose of Part 4 of the Commerce Act

In setting prices for PSE4, Auckland Airport has been closely guided by both the information disclosure regime, and the purpose of Part 4 of the Commerce Act. The purpose of Part 4 is set out below, with Auckland Airport emphasis:<sup>3</sup>

*The purpose of this Part is to promote the long-term benefit of consumers in markets referred to in section 52 by promoting outcomes that are consistent with outcomes produced in competitive markets such that suppliers of regulated goods or services—*

- (a) have incentives to innovate and to invest, including in replacement, upgraded, and new assets; and*
- (b) have incentives to improve efficiency and provide services at a quality that reflects consumer demands; and*
- (c) share with consumers the benefits of efficiency gains in the supply of the regulated goods or services, including through lower prices; and*
- (d) are limited in their ability to extract excessive profits.*

Accordingly, Auckland Airport interprets that the purpose of Part 4 is to “promote the long-term benefit of consumers by promoting outcomes that are consistent with outcomes produced in competitive markets.” The four limbs of Part 4, or what Auckland Airport describes in this submission as “**areas of**

<sup>1</sup> Commerce Commission, “Have your say on the review of Auckland Airport’s 2022-2027 price setting event - Process and Issues paper”, (November 2023), paragraph 3.

<sup>2</sup> Commerce Commission, “Have your say on the review of Auckland Airport’s 2022-2027 price setting event – Process and Issues paper”, (November 2023), paragraph 17.

<sup>3</sup> Section 52A, Part 4 of the Commerce Act 1986

**performance**” are then set out as considerations to how the purpose is to be achieved. Importantly, these areas of performance alone are not the purpose of Part 4 itself, but rather set out the areas of performance that should be considered when assessing if the purpose is being achieved.

Auckland Airport submits that care must be taken in assessing individual areas of performance, when seeking to draw conclusions if the purpose of Part 4 is being met. Further detail on why this is the case is provided in the following section.

### 3.2. Approach proposed by the Commission for this section 53B review

Auckland Airport’s pricing decision has been made with material consideration of the ID regime and the Part 4 purpose. As the Commission approaches this review to assess Auckland Airport’s performance, Auckland Airport considers that consistent with the purpose of Part 4 the Commission must:

- consider all the information published under the ID regime to determine whether the overall purpose of Part 4 is being met;
- assess all four individual areas of performance, not in isolation but in the overall context of the Part 4 purpose;
- consider in its assessment the expected impacts on end-consumers,
- take into account the specific circumstances of Auckland Airport’s pricing decision; and
- only consider information that was available at the time of setting prices.

These points are elaborated further below.

#### Consideration of backward-looking ID essential to best meet Part 4 purpose

Under ID regulation, Auckland Airport releases publicly on an annual basis backward-looking information that covers financial performance, indicators of airport capacity, measures of quality of service, and other associated statistics. The ID obligations also require the release of a detailed PSD following a pricing decision. These are important features of the ID regime, which requires a significant amount of resource to produce this information.

The release of this information is required under section 53B of the Commerce Act, which also stipulates under clause 2 (b) that the Commission:<sup>4</sup>

*must, as soon as practicable after any information is publicly disclosed, publish a summary and analysis of that information for the purpose of promoting greater understanding of the performance of individual regulated suppliers, their relative performance, and the changes in performance over time.*

In the Issues Paper, the Commission set out the following when discussing the proposed approach to this section 53B review:<sup>5</sup>

*We have flexibility under section 53B of the Act to determine which areas of performance we focus on and we are not required to consider all aspects of performance at one time. Price setting event disclosure generally contains forward-looking information and provides the most detail about expected profitability, prices and forecast expenditure, whereas historical information disclosure, which is not the subject of this review, tends to provide better insight into performance areas such as service quality, level of innovation, actual expenditure and return. Using the information in the PSE4 disclosure, we intend to mainly focus on profitability, investment and any related quality considerations, and comment on efficiency, pricing and innovation aspects.*

Auckland Airport does not dispute that the Commission has flexibility under section 53B in how it undertakes its reviews. Its current practice has been to only publish a review following the release of the information disclosures following a pricing decision. This is an approach that Auckland Airport remains supportive of going forward.

However, Auckland Airport disagrees with the Commission’s proposed approach that historical annual disclosures should not be the subject of this review for the following reasons:

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<sup>4</sup> Commerce Act (1987), section 53b clause 2(b)

<sup>5</sup> Commerce Commission, “Review of Auckland Airport’s Price Setting Event 4 – Process and Issues Paper”, (30 November 2023), paragraph 16



- Section 53B requires the Commission to “publish a summary and analysis” of all information released under information disclosure. Auckland Airport considers that this includes consideration of backward-looking annual disclosure information in order to provide interested persons with the full contextual assessment of airport performance.<sup>6</sup>
- exclusion of historical information disclosure reporting would also exclude any consideration of the impacts of the pandemic on airport performance. Given the material impact of this event – Auckland Airport’s revenues were over \$500 million below forecast in PSE3 due to the pandemic – these impacts must be given due consideration in any reasonable assessment of airport performance; and
- any review by the Commission of airport performance should consider whether the overall purpose of Part 4 is being met, and as, noted by the Commission, some areas of performance are best informed by backward-looking annual ID requirements rather than the forward-looking price setting disclosures.

Auckland Airport supports the Commission having flexibility in undertaking this review, including the areas on which it intends to focus. However, historical information of performance disclosed under the regime should be given due consideration to assess whether Auckland Airport’s performance is consistent with the purpose of Part 4.

### **Due consideration must be given to each of the four areas of performance**

The Commission’s flexibility under section 53B should not come at the expense of assessing whether the overall purpose of Part 4 is being met. Conclusions on individual areas of performance in isolation of the other areas of performance could result in findings and outcomes that are not consistent with the purpose of Part 4.

There are four areas of performance referred to in the Part 4 purpose statement, of which profitability, is only one aspect. The Commission has recognised this in previous reviews while noting its general approach of placing significant focus on airport profitability.<sup>7</sup> The Commission has also accepted the regulatory WACC is just one part of the information set that the Commission ought to refer to as part of its assessments of airport profitability.<sup>8</sup>

This reinforces the point that an assessment of profitability, using forward-looking information, is only one aspect of performance. The Commission therefore must have regard to other outcomes contained in the other limbs of the Part 4 purpose, such as quality, innovation and efficiencies to achieve a balanced and fair summary and analysis of Auckland Airport’s performance, consistent with the Commission’s obligations under section 53B.

### **Areas of performance are interrelated and must not be considered in isolation**

For airports the areas of performance set out under the Part 4 purpose are interrelated. These linkages are acknowledged in how Part 4 is drafted, with “and” included following each of the different areas of performance specified in the purpose statement. Examples of how these different areas of performance are interrelated include:

- the quality and efficiency of services being provided by an airport is heavily influenced by the infrastructure that is operational at that airport;
- an airport’s incentives to invest in infrastructure are closely linked to the expected return on that investment relative to its risk; and
- an airport’s profitability could be increased by reducing operational expenditure to too low a level, reducing service quality.

These interrelationships between individual areas of performance demonstrate why an assessment of each of these areas should not be undertaken in isolation. Rather, all areas of performance should be assessed and considered ‘on the whole’ in the context of meeting the Part 4 purpose.

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<sup>6</sup> While the Commission does publish online a database of data from the information disclosures, this is a collation of the information released by the airports through information disclosure and does not include any analysis of this information.

<sup>7</sup> Commerce Commission, “*Review of Auckland International Airport’s pricing decisions and expected performance (July 2017 – June 2022) - Final Report*”, (November 2018), paragraph A34.

<sup>8</sup> IM Review 2016, “*Final Decision, WACC Percentile Topic Paper*”, at paragraphs 91 to 97.

### **Approach to assess performance should be determined on a case-by-case basis**

The interrelationships described above will be different from one airport to the next depending on its specific circumstances. A bespoke approach for each individual airport is necessary to ensure the Part 4 purpose is being met - there is not one size that fits all.

By way of example, compare an airport that is capacity constrained to an airport that is not. Relative to the unconstrained airport:

- the capacity constrained airport is more likely to require investment to improve service quality; and
- when assessing profitability, the cost of regulatory error<sup>9</sup> can be greater for the constrained airport, as the costs of underinvestment to the consumer will be higher at the constrained airport.

This is highly relevant in the context of Auckland Airport's capital investment programme of \$6.7 billion over 10 years in regulated aeronautical assets to deliver the long-term capacity and service quality required for consumers. The cost to consumers of regulatory error when assessing returns that resulted in underinvestment would be materially higher at Auckland Airport, relative to an airport that did not face similar capacity constraints or need for investment.

Auckland Airport encourages the Commission to carefully consider the risk of regulatory error and the potential costs to consumers, especially when assessing profitability and the potential impact on investment.

### **Considering asymmetry of costs to consumers**

There were very large increases in airfares observed following the pandemic due to shortages in airline capacity relative to demand. This demonstrated how the cost of constrained airport capacity can result in materially higher airfares for consumers. A similar outcome could be expected to result where insufficient airport capacity is available to meet demand. This is reflective of dynamic airline pricing which can increase airfares significantly when demand exceeds supply.

Given that aeronautical charges only comprise a small percentage of an overall airfare, the impact on consumers from slightly higher airport charges would only be expected to result in a fraction of the increases in airfares that can occur where the capacity for air travel cannot meet demand, as demonstrated since the pandemic.

In the context of this Section 53B review, this example demonstrates how the impact on consumers can be different when assessing performance - namely airport profitability against the incentives to invest and the cost of underinvestment. Put another way, this shows how the costs to consumers are asymmetric.

Considering and adjusting for these asymmetric costs when setting WACC is consistent with the Commission's reasons for adopting the 67<sup>th</sup> WACC percentile for energy businesses in 2014.<sup>10</sup> Given the small percentage that airport charges make-up of an airfare, and the cost to consumers paid through higher airfares when demand exceeds supply, it is reasonable to expect that the asymmetry of the cost of setting the WACC too low for airports would exceed that of the energy sector. The impacts of the pandemic demonstrate new information that was not available when the Commission last considered this issue as part of the 2016 IM Review. Accordingly, Auckland Airport considers the Commission should give due consideration to the asymmetry of the costs to consumers when assessing profitability and investment, in light of this new information.

### **Information to be considered must have been available at the time of price setting**

Auckland Airport has been deliberate and conscious in its approach to price setting, in that it has had close and careful regard to the IMs that applied at the time of its price setting event on 7 June 2023 (which were the 2016 IMs) as well as the purpose of the ID, the Part 4 purpose statement and available guidance from the Commission, in particular its final 2016 IM Review decision.

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<sup>9</sup> Regulatory error in this context refers to the risk that a regulator adopts a finding which does not meet the objectives of Part 4. The risk of regulatory error exists for all economic regulation, and can occur in any regulated industry.

<sup>10</sup> Commerce Commission, "Amendment to the WACC percentile for price-quality regulation for electricity lines services and gas pipeline services (2014)", paragraph 3.8. We note that this was in 2014, and this has been amended to 65<sup>th</sup> percentile for electricity and 50<sup>th</sup> percentile for gas in the 2023 IM Review.

Auckland Airport agrees with and has followed the Commission's guidance in its 2016 IM Review. In the context of there being an ID regime in place for airports, the Commission has also acknowledged that while the IMs provide an appropriate benchmark for assessing expected performance, they do not necessarily provide the only legitimate benchmark for assessing expected performance against the purpose of Part 4.<sup>11</sup>

The Commission reiterates this point in its Issues Paper in respect of the mid-point WACC, noting that "there may be legitimate reasons for an airport to target returns that are different to its mid-point WACC estimate".<sup>12</sup> Auckland Airport has predominantly followed the Commission's approach, but where Auckland Airport considered that a principled approach has required a departure from the Commission's mid-point WACC estimate, those reasons have been set out in the PSD, explained to the Commission, and shared with airlines during consultation.

Feedback and views received from its airline customers during the pricing consultation are another important part of the information set available to Auckland Airport, and have also been taken into account in setting aeronautical charges. Auckland Airport's PSD sets out how, in some cases, Auckland Airport modified its proposal in direct response to such feedback.

It is therefore worth reiterating that it would not be reasonable for the Commission to consider new information that was not available to Auckland Airport at the time of price setting in its performance assessment exercise. This could also risk undermining the purpose of the IMs, which is to provide regulatory certainty. Such an approach could even result in outcomes inconsistent with the Part 4 purpose statement, for example, if it were to inhibit required investment.

As a point of clarification, Auckland Airport did not apply market data or information that became available following the commencement of the PSE4 pricing decision. The input parameters for determining the cost of capital were set based on the available information as at 30 June 2022. This was a principled decision, to ensure that the price freeze did not cause any benefit to Auckland Airport when determining an appropriate cost of capital (e.g. from rising interest rates).

### **Consideration of alternative choices is not necessary**

The Commission notes that in undertaking its review it is not required to determine the specific choices that Auckland Airport ought to have made in this pricing decision, or identify alternative approaches unless it chooses to do so.<sup>13</sup>

Auckland Airport supports this proposed approach, as it recognises there is considerable commercial judgment in weighing up a number of complex factors and interdependencies when setting aeronautical prices. Auckland Airport undertook extensive and detailed analysis in developing its pricing decision, informed by the ID regime, that considered various approaches against the backdrop of robust and frequent consultation with airline customers, all of which informed the final decisions that were taken.

Auckland Airport notes that the Commission has indicated it may choose to identify alternative approaches in undertaking its review. If the Commission opts to do this, Auckland Airport encourages it to ensure the reasons for doing so are consistent with the purpose of this review, and the purpose of Part 4.

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<sup>11</sup> Commerce Commission, "Final report on review of AIAL's PSE3 pricing decisions", para 39.

<sup>12</sup> Commerce Commission, "Have your say on the review of Auckland Airport's 2022-2027 price setting event - Process and Issues paper", (November 2023), paragraph 36.

<sup>13</sup> Ibid, paragraph 17.

## 4. Initial comments on specific considerations

Auckland Airport provides its response to the specific considerations set out in the Issues Paper below. The Questions are number in the order in which they appear in the Issues Paper (e.g. "IP Q1". Etc.).

### 4.1. Profitability

Profitability is only one of the four areas of assessment included in the purpose statement of Part 4. As set out above, Auckland Airport considers all four areas to be equally important, and that Part 4 is best met when its overall purpose is considered, all four areas are considered in their entirety, and the interlinkages between different areas are considered.

There are two main reasons why it was important that Auckland Airport accurately estimated its cost of capital for PSE4, to reflect the prevailing market conditions at the time. These are:

- **that a step-change in aeronautical investment is required** - following an extensive process of planning, development, and consultation it has been determined that Auckland Airport requires a significant increase in aeronautical investment. This has resulted in a forecast of \$6.7 billion of capital investment in aeronautical assets planned over a 10-year period; and
- **the pandemic demonstrated the risk of airport activities** - border closures and lockdowns caused air travel out of Auckland to all but cease, Auckland Airport revenues in PSE3 were \$500 million lower than was forecast at the time of setting prices – this event revealed the true risks faced by airports.

Accordingly, setting the target return for PSE4 needed to ensure that the incentives to invest in the infrastructure required at Auckland Airport were maintained, whilst ensuring that targeted profitability remained appropriate. The intention was to find the right balance, so that overall, the purpose of Part 4 continued to be promoted.

Auckland Airport considered that the most appropriate way to do this was to ensure that the cost of capital was informed by the most up to date and recent information in a way that was consistent with the regulatory precedent that had been set in the 2016 IMs. This was done by following a robust and logical process to determine an appropriate cost of capital at the beginning of the PSE4 pricing period. This process reached the following key conclusions:

- updating the 2016 IM comparator airport data to estimate asset beta at the start of the PSE4 pricing period (0.80) showed that the estimate had increased materially from the estimate in 2016 (0.65) - given the materiality of this input parameter, this demonstrated that the 2016 IM was out of date;
- given that various economic shocks can impact estimates of asset beta, it is impossible to accurately forecast and adjust for these shocks. The most accurate way to estimate asset beta in the long-run was to update the inputs for each pricing decision based on the latest available information;
- regulatory precedent in applying adjustments for the impacts of the COVID-19 pandemic provided greater compensation for risk to airports than the approach adopted by Auckland Airport to not make any pandemic related adjustments; and
- all conceptual and empirical analysis presented through consultation supported no longer applying a 5 basis points downward adjustment to asset beta to adjust for aeronautical risk.

Considering these findings, Auckland Airport considers that there is not a more principled and objective basis than the approach it followed, to update the input parameters at the start of the pricing period, which resulted in a mid-point post-tax WACC of 8.73%. Auckland Airport considers that this approach appropriately balanced the need to maintain incentives to invest in aeronautical infrastructure with keeping profitability at an appropriate level, consistent with the purpose of Part 4.

Auckland Airport's approach to forecasting of other inputs including depreciation and demand has ensured that these forecasts closely reflected the expected outcomes for these input parameters at the time of the pricing decision. The two-way revenue wash-up mechanism introduced in PSE4 is also reasonable. The impacts of the pandemic demonstrate the asymmetric risk faced by airports and this mechanism provides appropriate compensation.

## **Proposed approach to assess profitability**

Auckland Airport has reviewed the general approach proposed by the Commission to assess profitability.

### *Verification of expected returns*

Auckland Airport supports the Commission's proposed approach to estimate the expected return for PSE4 based on the airport's forecasts and comparing this to the disclosed return.<sup>14</sup> Undertaking this analysis will enable the Commission to verify that the returns as stated have been calculated correctly. This scrutiny is welcomed.

### *Assessment of reasons for different input parameters*

Auckland Airport agrees that the Commission should review and consider the reasons where different input parameters or approaches have been adopted for PSE4.<sup>15</sup> Auckland Airport has adopted a principled approach to setting its returns and has given careful consideration to the reasons and rationale for adopting different input parameters. Auckland Airport considered a number of alternative approaches to determining returns through the consultation process before forming a view on the most suitable approach that was consistent with the ID regime and regulatory precedent, and which appropriately calibrated its returns with its incentives to invest, consistent with the purpose of Part 4. This submission elaborates further on these reasons to assist the Commission in making this assessment in this review.

### *Impact analysis of different input parameters*

Auckland Airport supports the Commission considering the impact of different views on forecasts and projections.<sup>16</sup> When undertaking impact analysis, the Commission should be guided by the overall purpose of Part 4 and avoid a focus on areas of performance in isolation. Auckland Airport considers this is best achieved and most informative with an assessment of the impacts on the price of airfares, as this best reflects the impacts on consumers. Auckland Airport requests that, to ensure any impact analysis undertaken is informative, it is based on plausible or realistic inputs, and that the Commission avoids analysing hypothetical or unrealistic scenarios

### *Assessing the impact of risk-sharing mechanisms*

Auckland Airport agrees that the Commission should consider the impact of risk-sharing mechanisms introduced in PSE4, as the two-way revenue wash-up to address asymmetric risk was a key change made in this pricing decision. However, careful consideration must be given when assessing how these may have an impact on expected returns, particularly including their interaction with systematic risk, as measured by the asset beta.

As the asset beta adopted to set the target return reflects the average of a sample of comparator airport companies, the relative systematic risk of these companies, including any risk sharing mechanisms that they have in place is highly relevant when assessing Auckland Airport's asymmetric risk revenue wash-up.

Auckland Airport considers that an accurate assessment of these risk sharing mechanisms should not focus on any change in risk that results for Auckland Airport, but rather how, after introduction of this wash-up, the overall level of systematic risk of Auckland Airport compares to that of the companies in the comparator sample.

Put another way, it would only be appropriate to consider the change to Auckland Airport's systematic risk due to the asymmetric risk wash-up, if the cost of capital was set based on Auckland Airport's own asset beta, and not that of the wider comparator sample.

Advice Auckland Airport received through consultation considers this issue and sets out why no adjustment to asset beta was warranted. Further detail is provided on this later in this submission in section 4.

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<sup>14</sup> *ibid*, paragraph 33.

<sup>15</sup> *ibid*, paragraph 34.

<sup>16</sup> *ibid*

### *Assessing both priced and all regulated activities*

Auckland Airport agrees with the proposed approach to consider the returns for both priced and all regulated activities when assessing cost of capital and profitability.<sup>17</sup> This approach is consistent with the approach adopted for the PSE3 review. Auckland Airport notes that the returns on other regulated activities vary over time, with charges for these activities individually negotiated with customers outside of the aeronautical pricing consultation on Standard Charges.

Currently it is extremely challenging for Auckland Airport to archive a full commercial return from many of the non-priced regulated activities. This is expected to continue over the medium term based on current forecasts due to the significant amounts of capital expenditure in the aeronautical capital plan that are indirectly allocated to other aeronautical activities.

As a market-based approach is used to set rentals for these types of facilities, there is no direct way to recover revenue from these costs that are indirectly allocated to other aeronautical activities. While these investments will eventually generate a higher return, this is a long-term trend. These costs will be fully recovered when a point is reached where the residual value of these assets is depreciated materially, and as the rental rates increase in-line with general inflation. Eventually the returns will be higher than the priced target return, but in the meantime, these sub-commercial returns are expected to continue. This is the primary driver of why the overall regulated return is forecast to be below target in PSE4.

### *Question on profitability*

The Issues Paper for PSE4 poses the below question for feedback:<sup>18</sup>

*Is Auckland Airport targeting excessive profits?*

Auckland Airport notes that this question has been framed differently to the PSE3 review:<sup>19</sup>

*Is Auckland Airport's targeted return appropriate and why?*

*Can stakeholders provide expert advice relating to the determination of the cost of capital that was included as part of the consultation on Auckland Airport's price setting event?*

Auckland Airport considers that the question on this issue in the PSE3 review represents a more balanced and appropriate approach, as it is more consistent with the Part 4 purpose. By considering whether the targeted return is appropriate, this allows for broader consideration of profitability compared to how this question has been framed in this review. As set out above in section 0, there are complex interrelationships between the different areas of performance which is why they should not be considered in isolation.

Auckland Airport also notes that the Commission sought for stakeholders to provide expert advice related to the determination of the cost of capital in PSE3. The consideration of expert advice by the Commission on this issue is essential for it to effectively undertake this review.

Auckland Airport has provided the Commission with the expert advice that informed its approach to the cost of capital for PSE4 as part of this review. These expert reports contain confidential information and are accordingly not suitable for public release. However, Auckland Airport notes that they were provided to all Substantial Customers through the airline consultation process and informed the feedback received from airlines. Auckland Airport has provided these reports in accordance with the confidentiality agreements with Substantial Customers.

### **Auckland Airport-specific considerations for assessing profitability**

As set out in section 3.2 above, Auckland Airport considers that for this review to be most effective, it must consider the overall purpose of Part 4 and whether this purpose is being achieved by taking a holistic assessment, and taking into account the specific circumstances that apply to Auckland Airport.

The specific circumstances that the Commission should consider when assessing the profitability of Auckland Airport are:

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<sup>17</sup> Ibid, paragraph 37

<sup>18</sup> Ibid, page 11

<sup>19</sup> Commerce Commission, "Have your say on the review of Auckland and Christchurch Airports' third price setting events (July 2017-June 2022) 2022-2027 - Process and Issues paper", (October 2017), paragraph 10.

- *the cost of underinvestment;*
- *the post-pandemic risk profile of airports; and*
- *the impacts of aeronautical charges on the price of airfares.*

*The cost of underinvestment must be considered in the context of assessing Auckland Airport returns*

In determining the target return for PSE4, Auckland Airport had to carefully weigh two different limbs of the Part 4 purpose statement: maintaining incentives for investment and limiting excess profitability.

Capital investment planning at Auckland Airport has determined that \$6.7 billion of capital investment in aeronautical assets is required over the 10 years to 2032 to deliver the services required at Auckland Airport. This investment will bring additional capacity and improve the quality and resilience of airport services. Extensive planning, analysis and consultation has gone into determining that this investment is necessary to ensure that Auckland Airport can continue to serve as New Zealand's gateway to the world with the capacity and quality of service that customers expect.

The costs of underinvestment – of not delivering this plan – would be material for consumers and the wider New Zealand economy. This programme will ensure that Auckland Airport remains fit for the future and is able to meet demand for airport capacity. Not delivering this capacity would constrain growth, deteriorate the passenger experience and increase operational inefficiency and delays. A shortfall in capacity would also risk significantly higher airfares paid for by passengers.

Accordingly, it is true to say that the cost of under investment at Auckland Airport (in the event that the capital plan was not progressed) would be greater relative to an airport that did not require significant investment to continue to provide an appropriate level of service to consumers (e.g. an airport with spare capacity and/or more modern infrastructure).

*Profitability assessment should consider post-pandemic risk of airports*

Auckland Airport needs to set its returns at a level that adequately compensates investors for risk. To set returns below this level would risk the availability of capital and thus the delivery of the planned investment pipeline. Given the material impacts on the industry following the pandemic, it was clear much had changed in the aviation industry since the 2016 IM determination was finalised, and that some of the input parameters did not adequately reflect the risk of investment. The most appropriate way to ensure that it did, was to use the most recently available information to inform an updated estimate of the cost of capital.<sup>20</sup>

*Profitability assessment should consider impacts on the price of airfares*

As noted in section 0 above, as aeronautical charges comprise only a small percentage of an overall airfare, the impact on consumers where a WACC for airports is set too high would result in a fraction of the increases in airfares that have been demonstrated where the capacity for air travel cannot meet demand. Considering any increases in the context of the overall cost of airfares is the most informed way to assess the impacts of this profitability assessment and is also the most consistent with the Part 4 purpose statement.

## **IP Q1. Is Auckland Airport targeting excessive profits?**

Auckland Airport has not targeted excessive profits with the PSE4 pricing decision. The returns that have been targeted are appropriate in the circumstances in which they were set, and consistent with the purpose of Part 4 to achieve outcomes for the long-term benefit of consumers.

Auckland Airport has set the target return of 8.73% for PSE4. This was determined by following a principled, logical and thorough approach, consistent with the prevailing regulatory precedent. This involved updating input parameters to estimate the cost of capital to appropriately reflect the risk that airport investors face following the global pandemic. This submission builds on the information included in the PSE4 PSD, to demonstrate in detail the robust, logical process that was followed to determine an appropriate cost of capital to inform returns for PSE4.

As Auckland Airport embarks on a step-change in infrastructure investment with \$6.7 billion of planned capital investment over the 10-year forecast period, this process ensured that the returns on this

<sup>20</sup> Auckland Airport provides further detail on how the cost of capital was updated in the PSE4 PSD, in this submission, and in the accompanying expert reports which guided its approach.

investment appropriately reflected the risk – an outcome that promotes the long-term benefit of consumers and is consistent with the purpose of Part 4.

### The approach to determining the cost of capital inputs

The COVID-19 pandemic caused significant disruption to the aviation industry. Border closures and lockdowns caused air travel out of Auckland to all but cease for extended periods of time. The pandemic caused airport revenues to be \$500 million lower than the forecast at the time of setting prices for the PSE3 pricing period. While Auckland Airport has not sought to recover any of the under-recovery from the PSE3 pricing period, the pandemic revealed the true risks faced by airports, highlighting that pandemic risk was a real risk for airport operators and could have a significant impact on passenger demand.

Auckland Airport has used the same capital asset pricing model (“**CAPM**”) as used in the IMs to determine the cost of capital. An important part of the process for PSE4 pricing was to assess how best to align with the 2016 IM estimates. This involved determining if the parameters remained up to date:

- where the Commission updated CAPM inputs annually, these were considered up to date, and were adopted as per the *Cost of capital determination for disclosure year 2023 for information disclosure regulation* (“**2023 determination**”); and
- where the Commission did not update its CAPM inputs based on the latest available data in the 2023 determination, Auckland Airport sought to update these inputs in a way that was consistent with the 2016 IM.

Inputs that remained up to date in the 2023 determination included the risk-free rate, average debt premium, and tax rates. While debt issuance costs had not been updated, Auckland Airport did not consider these had changed from the 0.2% estimated in the 2016 IM, and therefore also adopted this input in determining WACC. The tax adjusted market risk premium (“**TAMRP**”) had been updated by the Commission and was most recently used in its decisions for the Gas IMs in March 2022. Inputs that had not been updated since the 2016 IM included asset beta, leverage, equity beta.

For determining the equity beta – a key input into estimating the cost of capital - the 2016 IMs were based on company comparator data to measure asset beta and leverage covering the 10 years to 31 March 2016. At the start of the PSE4 pricing period of 1 July 2022, an additional six years of available data was not reflected in the 2016 IM estimates. This included the new information about airports that was revealed by the pandemic, indicating that the true risks to aviation demand that were not reflected in the cost of capital determination in the 2016 IM, and had now been observed by investors over a six year period.

The 2016 IMs also included a downward adjustment to asset beta to reflect an assumption that aeronautical activities were lower risk than non-aeronautical activities, however the adjustment applied in the 2016 IMs had not been based on supporting empirical analysis. Further analysis provided the opportunity to consider whether this adjustment was a valid one.

Auckland Airport commissioned Competition Economics Group (“**CEG**”) led by Dr Tom Hird to provide advice on these matters related to the cost of capital, to inform its approach, and provide analysis to inform airline consultation, ahead of a decision to set prices for the PSE4 pricing period.

#### *Airline feedback*

The main point of concern raised through consultation by Substantial Customers was that the approach adopted by Auckland Airport was departing from the most recently published cost of capital Determination<sup>21</sup> by applying its own estimates for some of the cost of capital input parameters. The chief concern from customers was that Auckland Airport was adopting its own asset beta (and equity beta) and leverage inputs, rather than relying on the values specified in the 2016 IM.

#### *Auckland Airport approach*

ID regulation allows Auckland Airport to set its prices, and to determine the returns it will target on priced aeronautical activities. Once these returns are set, the Commission then reviews these decisions. The

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<sup>21</sup> Commerce Commission, “*Cost of Capital Determination for Disclosure Year 2023 for Information Disclosure Regulation [2022] NZCC 28*”, (August 2022)



Commission made it clear during Auckland Airport's PSE3 decision any departures in target return from its benchmark midpoint WACC calculation would be acceptable if accompanied by compelling evidence to support such departure.<sup>22</sup>

To determine up to date estimates that were consistent with the approach that was adopted in the 2016 IM, Auckland Airport considered the following matters, based on advice from CEG, when estimating asset beta, leverage and equity beta:

- *the appropriate time period of comparable company data to use to estimate these inputs, including the treatment of the pandemic period;*
- *the companies included in the comparator sample;*
- *re-estimating the average asset beta and leverage of the comparator sample; and*
- *considering analysis to verify (or not) the rationale behind the 5 basis point downward adjustment applied in the 2016 IM.*

The TAMRP is an economy-wide measure, in that it is sector agnostic, meaning that it is valid to be used where it has been updated by the Commission for other sectors since the 2016 IM. The most recent estimate of the TAMRP from the Commission used for fibre and gas sectors of 7.5% was adopted as the input parameter, relative to the 7% in the 2016 IM. This was considered to be the best approach given that it was the most recent estimate of a sector-agnostic measure, and considered appropriate by CEG.

The analysis that was developed and then consulted on with airlines, and used as the basis to estimate the inputs into the CAPM (based on the approach of the 2016 IM but using more up to date data), provides compelling evidence that the 2016 IM inputs were out of date. Auckland Airport considers that the analysis to determine these inputs was true to the methodology used to develop the 2016 IM, simply refreshed with the most recent information available at the start of the PSE4 pricing period.

The concerns raised in airline feedback were not consistent with the operation of the ID regime under which airports operate. This regulatory regime does not require airports to set their prices strictly based on the cost of capital that is stipulated in the IMs. Importantly, what the IMs do set out is the starting point the Commission will use when assessing profitability in this review for PSE4.

The principled and thorough approach undertaken through this process by Auckland Airport to develop this evidence base, which informed the input parameters used to determine the PSE4 target return, is outlined in the following sections of this submission.

### **Determining appropriate estimate windows for asset beta and leverage**

To update the asset beta and leverage estimates, the appropriate windows to estimate these parameters needed to be determined. In the context of the COVID-19 pandemic, this raised two main issues for consideration - whether the two five-year averaging period adopted in the 2016 IM was still appropriate, and whether the data should be adjusted due to the impacts of the COVID-19 pandemic.

#### *2016 IM*

In the 2016 IM, the Commission gave greatest weight to weekly and four-weekly estimates over the two most recent five-year periods.<sup>23</sup> The Commission's view was that this provided an appropriate balance between the number of observations, and the best reflection of beta for the future.<sup>24</sup> Accordingly, the Commission estimated asset beta based on the two five-year periods that ended in March 2016 for the 2016 IM.

#### *Determining the estimation window*

CEG considered Auckland Airport's proposed approach of updating the comparable company asset beta observation period to include the most recent 10 years of data, immediately preceding the five-year PSE4 period, which captures a period impacted by the COVID-19 pandemic.

<sup>22</sup> Commerce Commission, "Review of Auckland International Airport's pricing decisions and expected performance (July 2017 – June 2022) - Final Report", (November 2018), paragraphs 39 and 40

<sup>23</sup> 2016 IM Review Topic Paper 4 - Cost of Capital Issues, p. 122

<sup>24</sup> 2016 IM Review Topic Paper 4 - Cost of Capital Issues, p. 69

In Dr Hird's opinion, continuing to replicate the Commission's traditional rolling 10-year data analysis period can provide an actuarially fair attribution to all macro-economic events across time if it is updated at the start of every pricing period. This is because all years will be equally represented in pricing decisions over the long-run. He also observed that it would be sensible for such asset beta re-calculations to occur immediately prior to each regulated airport's five-yearly aeronautical price reset so that the calculated asset beta reflects the most recently available period of data and to ensure that all data is weighted correctly over the long-run, whereas the existing approach under the IMs of updating data every seven years, would not evenly weight all shocks over time.

This is demonstrated through the following observations from Dr Hird:<sup>25</sup>

- *there is no bias in the proposed methodology because that methodology will, on average and over time, accurately reflect and compensate for the scale and frequency of all shocks;*
- *the proposed method is largely the same as the existing NZCC IM method except it is applied once every five years, instead of every seven years, so as to apply at the start of each of Auckland Airport's PSEs;*
- *the estimation window must be a multiple of the length of the PSE because that ensures that all historical periods have the same weight in setting the asset beta actually applied in PSEs over time; and*
- *historically 10 years has been used to estimate the asset beta in New Zealand and, consistent with the second dot point [that each update has the same estimation window]<sup>26</sup>, I consider that 10 years should continue to be used. If, nonetheless, a longer period (e.g., 15 years) was adopted it should continue to be applied in all future PSEs.*

#### *Adjusting for the COVID-19 pandemic*

CEG cautioned against manipulating asset beta data sampling periods to under-weight periods impacted by economic shocks such as pandemics like COVID-19. It also cited examples of other large systematic shocks that are infrequent and unpredictable, like the Global Financial Crisis, the war in Ukraine and the subsequent sanctions on Russia, and the decades long industrialisation of China and its impacts on the global economy that had not been adjusted for to date. Dr Hird noted that to the extent that the impacts of any such economic shocks are regarded as 'over-represented' in a sample period that's impacted by such economic shocks, it will also be under-represented in periods where such shocks do not occur.

In considering adjusting for shocks, CEG considered that the probability *ex ante* of such economic shocks impacting the upcoming pricing period is greater than zero. To reflect this probability, at each aero pricing reset this would require an attempt to adjust the data set to exclude or reduce the impacts of economic shocks that occurred during the sample period, they would also need to make similar but opposite adjustments to include those non-zero risks in the asset beta calculations for future periods where the data isn't impacted by such economic shocks. This would be problematic to implement, difficult to undertake accurately, and significantly increase the complexity of estimating and adjusting for these shocks.

To get the right result over the long run the probability of such future economic shocks would need to be perfectly forecast. Since perfect foresight isn't possible in this context, CEG believes an approach that attempts to adjust measured asset beta results for economic shocks will deliver the wrong result over time.

The approach proposed by Auckland Airport, supported by CEG, and that will deliver the most accurate estimates over the long-run, is to not adjust the data and include the impacts of shocks in the periods when they occur, and update input data ahead of each pricing decision.

The following observations made by CEG in its advice are consistent with this position:

- *asset betas applied in PSE1 to PSE3 provided no pandemic related asset beta compensation. This is because no major pandemic event occurred in the relevant period over which asset betas were estimated;*

<sup>25</sup> CEG, "AIAL asset beta and WACC estimates for PSE4", (February 2023)

<sup>26</sup> [added by AIAL]

- *investors placed a non-zero probability on a major pandemic occurring over PSE1 to PSE3;*
- *the fact that asset betas in PSE1 to PSE3 did not include an uplift for (unobserved) pandemic risk is an illustration for why it would be a mistake to argue that the asset beta for PSE4 should be adjusted downward to remove some part of the (observed) pandemic impact on asset betas;*
- *the “true” frequency and severity of a COVID-19 like event (or, really, any major economic shock) is not known with any accuracy. Attempting to adjust for an unknown (and unknowable) true probability of an event is, in my view, likely to end in a regulatory quagmire of competing claims all based on views that are not, and cannot be, robustly evidenced;*
- *any argument for a pandemic adjustment is not peculiar to pandemics. If applied to a pandemic then it invites application to all large infrequent systematic shocks. In fact, all estimation windows for asset beta will be made up of a combination of shocks that do not reflect the “average” set of expected shocks.*
- *the more events that an estimation methodology seeks to adjust for overtime the more complex the asset beta estimate will become. Ultimately, the asset beta estimate would comprise mainly of previously determined estimates of increments/decrements for certain events X, Y and Z added to an asset beta estimate that becomes ever more contentious as stakeholders argue over whether the new estimation period is affected by X, Y and Z like events and, if so, how the impact of those events should be removed.*

#### *Airline feedback*

Feedback considered that adjustments to asset beta measurement due to the COVID-19 pandemic were warranted. Feedback considered that COVID-19 could not be treated like any other shock and included in the data and must instead be adjusted to reduce the COVID-19 impacts. Other feedback made the case that the COVID-19 impacts should be removed from the asset beta observations used.

Some airlines referred to the Flint Global approach for UK CAA referred to by TDB Advisory in the IM Review to adjust the pre-COVID asset beta for airports, estimating that Auckland Airport’s asset beta would have been increased for the COVID pandemic by between 0.00 and 0.08 – and that this approach should be replicated for the entire airport sample set.

#### *Consideration of airline feedback*

Auckland Airport sought further advice from CEG to consider the feedback received from airlines; where airlines called for COVID-19 impacted data to be de-weighted. CEG noted on these submissions that:<sup>27</sup>

*A well-considered proposal to “de-weight” the COVID-19 shock in estimating the asset beta for PSE4 would have included a discussion of all of the above issues. This would have included a discussion of uplifts for asset beta estimates for future PSEs but also a discussion of how this policy can be reconciled to the approach in past PSEs where asset betas gave zero weight to pandemic shocks and the fact that AIAL had just borne 100% of the uncompensated impact of the pandemic event risk that the submitters are proposing to de-weight from updated asset beta estimates. It would have included an acknowledgement that de- and re-weighting asset betas should result in the same long run asset beta of PSEs simply applying my method (a rolling average of 10 year asset betas estimated consistent with the IM method).*

*None of the submissions included discussion of such topics. Indeed, the discussion appeared to focus entirely on “de-weighting” COVID-19 in the historical period affected by COVID-19 without acknowledging that this logically implied the need for a “re-weighting” other periods not affected by COVID-19 to include an uplift or pandemic risk. In my view, this was a serious shortcoming in the submissions to AIAL suggesting some form of de-weighting the impact of COVID-19 on measured asset betas.*

This advice highlighted to Auckland Airport that the approach advocated by airlines of removing data impacted by COVID-19 (and potentially other future macroeconomic shocks) from the analysis period would result in a systematic under-estimation of airport sector systematic risk over the long term. Those economic shocks and associated periods of higher systematic risk are not hypothetical. They are

<sup>27</sup> CEG, “Review of feedback on AIAL WACC estimates for PSE4”, (May 2023), p. 13

indeed experienced by regulated airport companies through the course of time and must be reflected in returns to deliver investors their required risk-adjusted return over the long term.

Submissions were also received from airlines calling for the Flint method adopted by the UKCAA to be cited as relevant regulatory precedent and for it to be applied. The Flint method was used to calculate asset beta estimates for Heathrow, including pandemic related adjustments. Dr Hird found that the increase in asset beta from not adjusting for pandemic impacted data and including the COVID-19 impacted period, was of lower value than all of the pandemic related adjustments applied by the UKCAA.

Dr Hird made the following observations with regard to the Flint method as applied by the UKCAA:<sup>28</sup>

*Having applied a midpoint COVID uplift of 0.115 to HAL's asset beta, the UKCAA then reduces this by 0.085 to reflect a dramatic shifting of passenger volume risk from HAL to airline customers. This is achieved via a new Traffic Risk Sharing (TRS) mechanism. This mechanism shifts 50% of all traffic variations less than 10% from forecast from HAL to users. It also shifts 105% of (i.e., more than fully compensates HAL for) the risk of higher than 10% variation from forecast.*

*It is relevant to note that the 0.115 asset beta uplift (i.e., before the TRS decrement) is a very material increase in asset beta which should, if the logic is applied consistently, result in a permanent uplift to asset beta of this magnitude in all future determinations.*

*By way of comparison, I have estimated that the sample average asset beta is only 0.18 higher for the 5-years ending June 2022 (0.89) versus the 5-years ending June 2017 (0.71). This implies a PSE4 uplift to asset beta of only around 0.09 (noting that a 10 year average takes the average of both 5 year estimates and, therefore, halves the magnitude of the COVID-19 impact in the second 5 year period).*

*In summary, the COVID uplift that AIAL is effectively proposing [by not adjusting out COVID data]<sup>29</sup> is:*

- *Smaller than the UKCAA uplift (around 0.09 vs 0.115); and*
- *Is temporary (will fall to zero in PSE6 when COVID-19 falls out of the 10 year estimation window) while the UKCAA uplift is permanent (or, at least, will be permanent if future UKCAA decisions are internally consistent with the H7 decision).*

*Moreover, the above direct uplift to the asset beta is not the only way in which the UKCAA has provided compensation for pandemic risk. The UKCAA also:*

- *Added £300m to HAL's regulatory asset base in 2018 prices from 2021 onwards;*
- *Provided £25m per annum in all future years to compensate for the expected costs to HAL of a pandemic (based on an assumed frequency and length of a pandemic as set out in the last column of Table 1 above).*
- *Adopted a 0.87% lower forecast of passenger numbers than the UKCAA's "most likely" estimate.*

*AIAL is not proposing any of these forms of compensation. It is relatively simple to express each of these changes in an "asset beta uplift" equivalent manner. That is, to calculate the asset beta uplift that would provide the same compensation to AIAL as the above policies provide to HAL (adjusting for differences in scale between HAL and AIAL and also differences in risk sharing mechanisms in place). When I do this I estimate that the UKCAA policies outlined above would, if applied to AIAL, be equivalent in value terms to a 0.26 permanent uplift in asset beta for AIAL.*

Dr Hird's consideration of the airline feedback and further analysis provided Auckland Airport with further confidence and reassurance in the approach that had been adopted, to not adjust for pandemic impacted data was reasonable, if not conservative given that the inclusion of COVID impacted data had

<sup>28</sup> CEG, "Review of feedback on AIAL WACC estimates for PSE4", (May 2023), p. 14-16

<sup>29</sup> Auckland Airport context added

increased the asset beta estimate by less than the equivalent pandemic related adjustments applied by the UKCAA for Heathrow. As summarised by Dr Hird:<sup>30</sup>

*The submissions that referred to the UKCAA precedent for dealing with the pandemic do not provide full account of UKCAA policy. A full account would have noted AIAL's proposed asset beta can reasonably be characterised as involving a temporary uplift that is less than one quarter of the permanent compensation that would be consistent with the logic and calculations of UKCAA decision being applied to AIAL.*

#### *Auckland Airport approach*

Auckland Airport considered the analysis and submissions of airlines received through consultation, alongside the advice of CEG.

Auckland Airport considered that the most appropriate approach in choosing the estimation windows of asset beta and leverage estimates, was to adopt the approach of estimates based on the average of the two recent five-year periods as at the start of the pricing period. This approach was favoured because:

- it was consistent with the approach adopted by the Commission in the 2016 IM to use two-five year periods,<sup>31</sup> the only difference being that as this is carried forward it would be replicated every five-years, not every seven under the IMs; and
- this approach would result in actuarially fair estimates over the long-run as all shocks would be given equal weight in determining the asset beta estimates.

When considering whether adjustments due to the COVID-19 pandemic should be applied to asset beta estimates, Auckland Airport opted to not apply any adjustments to the asset beta and leverage estimates for the following reasons:

- changes to the regulatory approach to adjust for shocks would open up a regulatory quagmire, to determine not only which shocks should be adjusted for, but then how to determine or calculate the appropriate adjustment that should be made, this would require excessive judgment and undermine regulatory certainty and depart from the approach adopted in the 2016 IM; and
- the relevant regulatory precedent of adjusting for the COVID-19 pandemic for airports adopted by the UKCAA for Heathrow, made adjustments that were equivalent to a materially higher asset beta uplift, compared to the increase in asset beta due to the inclusion of COVID-19 impacted data. This provided Auckland Airport comfort that the proposed approach was not providing excessive compensation for pandemic risk.

#### **Selecting the company comparator sample, and estimating asset beta and leverage of that sample**

To update the inputs of asset beta and leverage for the most recent information into the CAPM, a comparator sample needed to be selected, and updated estimates reflecting the latest data developed. The process to select the comparator sample and update the estimates is outlined below.

##### *2016 IM*

In the 2016 IM Review, the Commission identified its sample of comparator firms by identifying companies on Bloomberg with 'airport' in the description, and then assessing the nature and extent of each company's business, excluding firms that were not considered comparable (to airports), only including companies with at least five years of trading data, and a market value of equity of at least US\$100 million. This resulted in a comparator sample of 26 firms.

The Commission considered that it updated the comparator sample in a way that was consistent with its existing approach from the 2010 IMs, aligned to the submissions from NZ Airports to the IM Review, which considered the existing approach of using the largest possible comparator sample would provide regulatory certainty.<sup>32</sup>

##### *Selecting the airport comparator sample*

<sup>30</sup> Ibid, p. 19

<sup>31</sup> Commerce Commission, "Input methodologies review decisions Topic paper 4: Cost of capital issues", (20 December 2016), p. 148, paragraphs 473 and 572.

<sup>32</sup> [2016 IM Draft Cost of Capital Issues paper](#), p. 102

Auckland Airport asked CEG to provide advice on an updated comparator sample for the estimation window of the two five-year periods ended 30 June 2022, consistent with the approach outlined above in section 0. CEG considered that the approach from the 2016 IM to select a wide comparator sample was best practice:<sup>33</sup>

*I regard the NZCC's 2016 IM methodology as highly robust. The most important fact that a robust methodology must deal with is the high levels of noise in asset beta estimates. These include noise in:*

- *Asset beta estimates for the same firm over the same time period but using different sampling periods (e.g., weekly asset betas estimated over the same 5 year period but defining the week as starting on Monday instead of Tuesday etc);*
- *Asset beta estimate for the same firm estimated over different time periods (e.g., 5 years ending June 2022 vs 5 years ending June 2017);*
- *Asset beta estimates for different firms in different geographical locations over the same period.*

*That is why I consider that the NZCC 2016 IM methodology of adopting a large sample is best practice. A large sample ensures that the sample average that is being used is less affected by noise in the empirical beta estimation (as a proxy for the comparator's true asset betas).*

*It is also important to have a geographically diverse set of comparators because noise in the empirically estimated asset betas will often be geographically correlated. Different geographies are subject to different economic shocks at different times (e.g., European airport stocks were most affected (and asset betas likely depressed) by the financial turmoil surrounding the financial crisis of 2008-09 and the subsequent Eurozone crisis.*

CEG applied its understanding of the Commission's criteria from the 2016 IM to select comparable companies, and considered updated samples selected by both LJK Consulting for Auckland Airport, and Cambridge Economic Policy Associates ("CEPA") for the Commission, both of which sought to apply the same criteria as was used in the 2016 IM. CEG's advice considered in detail whether a number of different airports should be excluded from the comparator sample.<sup>34</sup>

CEG's final sample, having undertaken this analysis, was largely aligned to that of Auckland Airport and CEPA, with a small number of changes made based on the in-depth analysis undertaken by CEG to consider airport comparator companies:<sup>35</sup>

*My proposed sample includes all airports identified by CEPA and AIAL excluding GMR Industries and Airport Facilities. I include Aero SG (Belgrade) in the 5 years ending June 2022 I consider that reasonable minds might differ about the inclusion of this observation due to the potential for the concession agreement with VINCI to alter the exposure of AERO SG to passenger volume risk.*

#### *Updated asset beta and leverage estimates*

CEG then estimated the asset beta and leverage estimates of its identified sample, consistent with the approach used by the Commission in the 2016 IM, taking the average of two five-year periods up to 30 June 2022, based on weekly and four-weekly asset beta estimates. As described by CEG:<sup>36</sup>

*The 2016 IM method adopted the sample average of weekly and four weekly asset betas estimates over a 10 year period – where the 10 year period was broken into two estimation periods. For each comparator in the sample the:*

- *Weekly asset beta was an average of 5 different estimated weekly asset betas (each starting on a different day (e.g., Monday, Tuesday etc);*
- *Similarly, the four weekly asset beta was an average of 20 different estimated weekly asset betas (each starting on a different day).*

<sup>33</sup> CEG, "AIAL asset beta and WACC estimates for PSE4", (February 2023), pp. 21, 23 and 24.

<sup>34</sup> Ibid, p. 25-33

<sup>35</sup> CEG, "AIAL asset beta and WACC estimates for PSE4", (February 2023), p. 33

<sup>36</sup> Ibid, p. 34

This advice from CEG followed initial analysis undertaken by LJK Consulting for Auckland Airport, as well as analysis undertaken by CEPA for the Commission as part of the IM Review.<sup>37</sup> Having undertaken this analysis, Dr Tom Hird found that:<sup>38</sup>

*I estimate a sample average asset beta of 0.80 which is consistent with estimates from CEPA and LJK consulting. The sample average leverage is 14% (15% in the five years to June 2017 and 13% in the 5 years to June 2022).*

#### *Airline feedback*

Auckland Airport received submissions in response to its Draft Pricing Proposal that considered that a materially smaller comparator sample of airports be used. These submissions proposed that less than one-third of the 29 airports be included in the comparator sample.<sup>39</sup>

#### *Consideration of airline feedback*

Auckland Airport provided the feedback received on the selection of the comparator sample to CEG and requested further advice on the feedback received. CEG considered a number of the reasons raised to exclude firms from the comparator sample. It found that the reduced comparator sample had been determined on a largely arbitrary criteria that happened to only include the lower risk airports.

Furthermore, Auckland Airport considered that adopting a narrow sample of comparator airports as proposed would have been a significant departure in the regulatory precedent that was set by the Commission in the 2010 IM determinations and 2016 IM Reviews, where the broadest sample of comparator companies had been chosen with limited exclusions.

#### *Auckland Airport conclusions*

The thorough and robust analysis from CEG, including the detail provided on how CEG applied the 2016 IM to update the comparator sample, and the consistency of results with third parties gave Auckland Airport confidence that the estimates provided by CEG were reliable. Furthermore, CEG's approach to selecting the comparator sample was robust and consistent with the approach adopted in the 2016 IM.

While airline feedback considered that material changes to the comparator should be made, Auckland Airport agreed that this was not a reasonable approach and would have been a significant departure from regulatory precedent.

Accordingly, Auckland Airport adopted the estimates by CEG of asset beta and leverage for the comparator sample of 0.80 for asset beta, and 14% for leverage.<sup>40</sup>

### **The 5 basis point downward adjustment to the comparable company asset beta estimate**

The analysis undertaken to prove or disprove the rationale for the 5 basis point downward adjustment to the comparable company asset beta estimate is set out below.

#### *2016 IM approach*

In the 2016 IM, the Commission applied a 5 basis point downward adjustment to asset beta, over and above the measured average across the comparator sample. The rationale behind this adjustment was that asset beta from the comparator sample was likely to overstate beta for regulated aeronautical activities, because the asset beta relates to airport's overall (multi-divisional) businesses, and the aeronautical elements of the business were lower risk than the non-aeronautical components.

At the time of the 2016 IM Review, NZ Airports, Auckland Airport and UniServices submitted to the Commission that the downward adjustment was not warranted. The Commission maintained the adjustment in its final determination, did acknowledge that the analysis in the Draft Decision included errors which when corrected did not support the downward adjustment, but cited other reasons for

<sup>37</sup> CEPA, "[Review of Cost of Capital 2022/2023](#)". (November 2022)

<sup>38</sup> CEG, "[AIAL asset beta and WACC estimates for PSE4](#)", (February 2023), p. 7

<sup>39</sup> CEPA and CEG both made limited exclusions from this full sample set.

<sup>40</sup> We note that in paragraph 38 of the process and issues paper the Commission noted that adopting a leverage input of 14% increased WACC. This is not correct, the lower leverage assumption was adopted to be consistent with the estimation of asset beta, and had the impact relative to the 2016 IM to reduce the WACC, offsetting increases from the update to asset beta.

maintaining the adjustment in its final decision.<sup>41</sup> The adjustment applied to asset beta was to reduce it by 0.05, from 0.65 to 0.60 in the 2016 IM.

#### *Empirical analysis of aeronautical risk and asset beta*

Given that there was no empirical evidence that supported the downward adjustment made in the 2016 IM, ahead of setting PSE4 prices and the 2023 IM Review, Auckland Airport sought further empirical analysis to consider whether there was any evidence that aeronautical services have lower systematic risk than total airport revenues. Analysis was undertaken by LJK Consulting for Auckland Airport, which found that there was no statistically significant relationship between airport asset betas and the share of non-aeronautical revenues – this finding supported the removal of the downward adjustment that had been applied in the 2016 IM.

To gain further comfort with these conclusions, Auckland Airport asked CEG to also consider whether there was a valid basis for the downward adjustment. CEG considered the issue both conceptually, and empirically, and its findings were consistent with the analysis it undertook for NZ Airports which was submitted to the 2023 IM Review.<sup>42</sup>

#### *CEG analysis*

At a conceptual level, CEG considered a range of scenarios of permanent and transient shocks to demand and considered the expected impact for both aeronautical vs non-aeronautical segments of airport operations, and the relevant risk of these operations. This analysis considered the different types of non-aeronautical business segments that airport businesses typically operate, and the relative risk profile of each of these types of operations. Having completed this conceptual analysis, Dr Hird found that in relation to temporary shocks:<sup>43</sup>

*aeronautical cash-flows are riskier than the average of airport wide cash-flows. This is because airport-wide cash-flows are more stable due to the stability of cash-flow from services that have contractually fixed payments and/or are not sensitive to passenger volumes.*

In relation to permanent shocks, Dr Hird found that:<sup>44</sup>

*in the context of a permanent shock to passenger numbers, aeronautical services may be expected to have:*

- ***lower risk than some non-aeronautical services*** (e.g., car parking) where a shock to passenger numbers gives rise to the same or similar immediate impacts on cash-flows but where the shock might have higher impact on long run non-aeronautical cash-flows; but
- ***higher risk than some services*** where revenues are unrelated or less sensitive to passenger numbers in both the short and long term (e.g., some land/building leases); and
- ***uncertain relative risk for other services*** where contractual cash-flows mean there is no short term impact but where there may be a long term impact when contracts are renegotiated.

#### *CEG empirical analysis*

CEG supplemented the conceptual analysis with in-depth empirical analysis of the relationship between asset beta risk and the share of non-aeronautical revenues/profits across all listed airports. This is the same analysis undertaken by CEG for NZ Airports that was submitted to the 2023 IM Review.<sup>45</sup>

This in-depth analysis included the collection of data of aeronautical and non-aeronautical revenues and where available EBIT for aeronautical and non-aeronautical operations between 2018 to 2021, to enable the regression of asset beta against the percentage of non-aeronautical revenues, and analyse the impacts of the COVID-19 pandemic on aeronautical and non-aeronautical business segments.

Dr Hird summarised the findings of this analysis:<sup>46</sup>

<sup>41</sup> [2016 IM Cost of capital reasons paper](#)

<sup>42</sup> CEG, NZCC comments on asset beta estimates for airports, February 2023

<sup>43</sup> CEG, "AIAL asset beta and WACC estimates for PSE4", (February 2023), p. 41

<sup>44</sup> Ibid, p. 41-42

<sup>45</sup> NZCC comments on asset beta estimates for airports, February 2023

<sup>46</sup> Ibid, p. 22



*The empirical analysis undertaken in this report strongly suggests that, if anything, non-aeronautical operations are lower risk than aeronautical operations. This is based on evidence that:*

- *measured asset betas are lower the larger the share of non-aeronautical revenues;*
- *aeronautical profits were much more sensitive to COVID-19 than non-aeronautical profits; and*
- *aeronautical revenues were near universally also more sensitive to COVID-19 than non-aeronautical profits (across all but 2 out of 26 airports).*

Key results of the analysis included:

*There is a statistically significant negative relationship between measured asset betas and the non-aeronautical share of total revenue (noting that this analysis must be performed using revenue rather than profits because the sample would be only 5 firms if profits was used).*

*When performing an event study off the effect of COVID-19 we find that aeronautical:*

- *profit (measured as EBIT or EBITDA) fell by more than non-aeronautical profit for the five airports that report in this way (Japan Airport Terminal, AIAL, Frankfurt, AdP and AENA);*
- *revenue fell by more than non-aeronautical revenue for 24 out of the 26 airports.*

Dr Hird summarised the conclusions of his analysis as follows:<sup>47</sup>

*In summary, I do not consider that there is a valid conceptual or empirical case for presuming that aeronautical asset betas are lower than non-aeronautical asset betas.*

*Conceptually, aeronautical cash-flows are more exposed to temporary economic shocks than non-aeronautical cash-flows and have average risk exposure to permanent economic shocks. If anything, this suggest higher risk for aeronautical activity than non-aeronautical activities.*

*Empirically, the available evidence suggest that if any adjustment were to be made it would be positive. That is, the evidence suggests that, if anything, aeronautical operations are higher risk than non-aeronautical operations at the average airport.*

#### *Airline feedback*

Feedback considered that the Commission's 5 basis points downward adjustment to reflect the assumption that aeronautical activities were lower non-diversifiable (systematic) risk should be maintained. One submission offered an illustrative explanation of this empirical finding arguing that it might reflect the fact that the smaller an airports' non-aeronautical operations, the riskier those non-aeronautical operations are. No other empirical evidence that aeronautical was lower risk was provided, but rather referred to non-aviation industry comparisons, and provided illustrative examples.

#### *Consideration of airline feedback*

CEG considered the feedback that was received on aeronautical risk, particularly the illustrative submission that the statistically significant relationship found by Dr Hird could be explained by the share of non-aeronautical operations of an airport could be the driver of this risk, and observed that:<sup>48</sup>

*In my view this is simply not a credible potential explanation for the observed empirical relationship I presented. Even if there was no other evidence or theory, Occam's razor would require that the simplest explanation be adopted. Namely, that lower observed asset betas for airports with more non-aeronautical operations suggests that, if anything, non-aeronautical operations are lower risk. Certainly, it suggests that non-aeronautical operations are very unlikely to be higher risk on average.*

*Moreover, I presented other evidence that supports the view that non-aeronautical operations are lower risk than aeronautical operations. This was evidence to the effect that aeronautical revenues and profits fell by materially more than non-aeronautical revenues and profits during*

<sup>47</sup> CEG, "AIAL asset beta and WACC estimates for PSE4", (February 2023), p. 48

<sup>48</sup> CEG, "Review of feedback on AIAL WACC estimates for PSE4", (May 2023), p. 26-28

*the COVID-19 shock. I summarised analysis presented in my February 2023 report for New Zealand Airports in my February 2023 report for AIAL as follows:*

*Key results from that analysis are that*

- *There is a statistically significant negative relationship between measured asset betas and the non-aeronautical share of total revenue (noting that this analysis must be performed using revenue rather than profits because the sample would be only 5 firms if profits was used.*
- *When performing an event study off the effect of COVID-19 we find that aeronautical:*
  - *profit (measured as EBIT or EBITDA) fell by more than non-aeronautical profit for the five airports that report in this way (Japan Airport Terminal, 29 AIAL, Frankfurt, AdP and AENA);*
  - *revenue fell by more than non-aeronautical revenue for 24 out of the 26 airports.*
- *Moreover, Japan Airport Terminal was one of the two firms where this did not occur and I have already noted that Japan Airport Terminal's revenues are a special case with non-aeronautical revenues overstating the importance of non-aeronautical profits (and that Japan Airport Terminal's aeronautical EBIT fell by more than its non-aeronautical EBIT (as is the case for all other airports that report profits on a segment basis)). This leaves HNA as the only other airport that where aeronautical revenues were less affected by COVID-19 than non-aeronautical operations.*

*The submitters did not address the additional evidence in the second and third dot points listed above. Neither did they address my conceptual explanation for why this was not a surprising result - discussed in detail in section 6.1 of my February 2023 report for AIAL.*

Auckland Airport agreed with the conclusions that CEG reached in the consideration of the feedback received through consultation.

#### *Decision taken by Auckland Airport*

Having considered the analysis undertaken by CEG, the conclusions reached by Dr Hird based on his analysis, the feedback from airlines, and further expert advice on that feedback, the evidence before Auckland Airport indicated that there was no evidence for the downward adjustment to asset beta that was applied in the 2016 IM.

The empirical analysis by CEG indicated that aeronautical activities were higher risk than other non-aeronautical business activities across the comparator sample. If an adjustment were to be applied to asset beta, these findings would justify any adjustment to be upwards rather than downwards.

Given the conclusive evidence against the rationale for the downward adjustment to asset beta of 0.05, Auckland Airport did not apply the adjustment from the 2016 IM in the PSE4 pricing decision, or any adjustments to the estimated average asset beta of the comparator sample.

Accordingly, an asset beta of 0.80 was adopted in the CAPM.

#### **Tax adjusted market risk premium**

The rationale for selecting the TAMRP estimate for the CAPM is outlined below.

##### *2016 IM approach*

The Commission adopted a TAMRP of 7% in the 2016 IM. The TAMRP is a forward-looking concept, that cannot be directly observed, but there are a number of approaches that can be used to estimate the TAMRP. In the 2016 IM, the Commission considered the evidence from a range of estimators, which informed its determination of 7% for the 2016 IM. This was consistent with the estimation in the 2010 IM.

##### *Adopting the most recent estimate of TAMRP*

The TAMRP is a market-wide parameter, as it is not specific to one sector. The Commission uses a consistent approach across sectors, and updates these on a periodic basis.

At the time of setting prices for the PSE4 pricing period, the Commission's most recent decision on TAMRP was in March 2022 for the Gas IMs which included resetting the TAMRP from 7% to 7.5% for both regulated pipeline segments. In doing so, the Commission noted the TAMRP is an economy-wide parameter and therefore should be the same across all sectors.<sup>49</sup>

Auckland Airport considered that using the Commission's most recent TAMRP estimate available at the time of the start of the PSE4 pricing period, was consistent with the principle of updating of all input parameters to reflect the most recent information prior to the pricing period commencing and proposed a TAMRP of 7.5%.

#### *Airline feedback*

Customer feedback suggested Auckland Airport continues to apply the Commission's 2016 IM estimate of the TAMRP set at 7%, despite recent practice by the Commission to the contrary. There was also a suggestion that Auckland Airport adopts the TDB Advisory Report recommendation to the Commission (as part of the IM Review) for the Commission to discontinue its practice of rounding the median estimate of the TAMRP to the nearest 0.5. Rather, TDB Advisory suggests the Commission use the median estimate itself which would have the TAMRP set at 7.3% instead of 7.5%.

#### *Decision taken by Auckland Airport*

During consultation, no evidence or arguments were provided by airlines as to why the Commission's most recent TAMRP estimate prior to PSE4, which is a sector-agnostic parameter, should not be adopted. The suggestion that the median estimate itself be adopted was not consistent with the most recent decision by the Commission for this parameter.

Auckland Airport considered that using the Commission's most recent TAMRP estimate available at the start of the pricing period was the most appropriate approach. This latest estimate of TAMRP adopted by the Commission was in 2021, where an estimate of 7.5% was used.

Accordingly, a TAMRP of 7.5% was adopted in the CAPM for the final pricing decision for the PSE4 pricing period.

### **Key conclusions of the analysis to update the cost of capital**

Having undertaken this extensive analysis to determine an appropriate set of updates to the input parameters for the cost of capital, Auckland Airport reached the following key conclusions:

- updating the 2016 IM comparator airport data to estimate asset beta at the start of the PSE4 pricing period (0.80) showed that the estimate had increased materially from the estimate in 2016 (0.65) - given the materiality of this input parameter, this demonstrated that the 2016 IM was out of date;
- given that various economic shocks can impact estimates of asset beta, it is impossible to accurately forecast and adjust for these shocks;
- the only possible way to ensure asset beta estimates are accurate in the long-run is to include all historical data without adjustments and weigh it equally over time. The latter is not possible with the current seven-year IM review cycle, where airports set prices on a five-year cycle, but could be achieved if input data is updated at the start of each airport's pricing period;
- this approach would be consistent with the principle that every pricing decision is based on the latest available information at the start of each pricing period;
- regulatory precedent in applying adjustments for the impacts of the COVID-19 pandemic provided greater compensation for risk to airports than the approach adopted by Auckland Airport to not make any pandemic related adjustments; and
- all conceptual and empirical analysis presented through consultation supported no longer applying 5 basis points downward adjustment to asset beta to adjust for aeronautical risk.

Considering these findings, Auckland Airport considers that there is no-more principled and objective basis than the approach it followed for establishing the target return for the PSE4 pricing period.

While changes to the regulatory framework are outside the scope of this review, Auckland Airport considers that given the robustness of this principled approach, this is the method for estimating the

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<sup>49</sup> Commerce Commission, "Amendments to Input Methodologies for Gas Pipeline Businesses related to the 2022 Default Price-Quality Paths Weighted Average Cost of Capital Reasons Paper", 25 March 2022

cost of capital that Auckland Airport consider appropriate to be adopted in subsequent pricing periods. This would promote regulatory certainty, forming part of a robust regulatory framework for airports.

### **CAPM inputs adopted for PSE4 pricing**

After carefully considering airlines' feedback and Dr Hird's analysis as outlined above, Auckland Airport decided to adopt a target return for the PSE4 pricing period of 8.73%, reflecting the mid-point WACC based on the most up to date CAPM inputs at the start of the PSE4 pricing period.

Auckland Airport is confident that the approach for the PSE4 aeronautical pricing decision, supported by expert analysis, is highly principled and robust. The approach replicates the Commission's previous WACC IM, except for discontinuing the discredited 5 basis points downward asset beta adjustment and uses updated data.

The input parameters used to determine this target return are set out in the table below.

**Table 1: Final WACC input parameters for PSE4 target return**

<b>WACC element</b>	<b>Input element</b>	<b>Reference</b>
Risk free rate	3.60%	Commerce Commission Cost of Capital Determination, for disclosure year 2023 <sup>50</sup>
Investor Tax Rate	28%	
Asset Beta	0.80	Updated estimate
Equity Beta	0.930	Calculation
TAMRP	7.50%	Commerce Commission, Gas and Fibre IMs <sup>51</sup>
<b>Cost of equity</b>	<b>9.57%</b>	Calculation
Debt margin	1.17%	Commerce Commission Cost of Capital Determination, for disclosure year 2023 <sup>31</sup>
Debt Issuance Costs	0.20%	Commerce Commission Cost of Capital Determination, for disclosure year 2023 <sup>31</sup>
<b>Cost of debt (pre-tax)</b>	<b>4.97%</b>	Calculation
Corporate tax rate	28%	
<i>Ratios</i>		
Debt to Value ratio	14%	Updated estimate
Equity to Value ratio	86%	Calculation
<b>Post-tax WACC</b>	<b>8.73%</b>	Calculation

### **IP Q2. Is Auckland Airport's approach to forecasting depreciation reasonable?**

Auckland Airport has used standard depreciation to determine the forecast revenue requirement when setting PSE4 prices. The only departure from standard practice was to adopt shorter asset lives for some of the Domestic Terminal Building ("DTB") upgrade projects; to fully depreciate these assets by June 2029 when the existing DTB is forecast to be decommissioned. This approach was consistent with the IMs and Generally Agreed Accounting Practice ("GAAP"), the depreciation period for these assets matched the period that they are expected to be in use.

During consultation airlines requested more information on what projects had been subject to accelerated depreciation, and the impacts of this change. Ahead of setting prices Auckland Airport

<sup>50</sup> Commerce Commission, "Cost of Capital Determination for Disclosure Year 2023 for Information Disclosure Regulation" [2022] NZCC 28, 2 August 2022

<sup>51</sup> Commerce Commission, "Fibre Input Methodologies Determination", 13 October 2020, "Gas Distribution Input Methodologies Determination" 25 March 2022 and "Gas Transmission Input Methodologies Determination" 25 March 2022

shared additional information with airlines on the projects which had shortened asset lives and the impacts of this approach.<sup>52</sup>

There were two projects in the capital plan where shortened asset lives were adopted:

- **Domestic Security Upgrades (\$5.7m)** – compliance project for Aviation Security at DTB screening to increase screening capacity; and
- **DTB Upgrades (\$57.1m)** – a programme of works to upgrade the DTB to extend its life as pandemic delays to the terminal integration programme mean it will be in operation longer than originally planned. This included renewals to the building and its systems (HVAC, lifts and escalators, fire, electrical, asbestos management etc.), upgrades to bathrooms, an aesthetic refresh of the building, and additional seating and dwell space within the existing footprint.

The changes to the asset lives adopted for these projects are outlined below in Table 2. The accelerated lives for the DTB renewals projects have a range, as these projects are delivered over a number of years.

**Table 2: Non-standard asset lives for DTB assets**

Asset lives assumed	Accelerated	Standard
Domestic Screening Upgrade	6	10
DTB Renewals	2-6	10-25

Auckland Airport also modelled the financial impacts of adopting non-standard asset lives on the PSE4 pricing period. By accelerating the depreciation, this increased the amount of allowable revenue in the PSE4 pricing period, however this was offset by a lower return on capital for these assets, as the asset base is depreciated more quickly than with the standard asset lives. The net impact of these two effects was estimated to be an increase of required revenue of \$17.1 million across the PSE4 pricing period, as outlined below in Table 3. This increase in revenue was equivalent to 35 cents per DTB passenger over the PSE4 pricing period.

**Table 3: Financial impacts of non-standard depreciation**

PSE4 depreciation (\$ million)	FY23	FY24	FY25	FY26	FY27	Total
Accelerated Depreciation	0.0	1.0	1.7	11.2	16.1	<b>30.0</b>
Standard Depreciation	0.0	0.6	0.8	3.4	4.3	<b>9.1</b>
<b>Depreciation Difference</b>	<b>0.0</b>	<b>0.4</b>	<b>0.9</b>	<b>7.9</b>	<b>11.8</b>	<b>20.9</b>
Greater 'return on capital' under standard depreciation	0.0	0.0	0.2	1.1	2.5	<b>3.8</b>
<b>Net impact on required revenue</b>	<b>0.0</b>	<b>0.4</b>	<b>0.7</b>	<b>6.8</b>	<b>9.2</b>	<b>17.1</b>

The alternative approach to the above would have been to not adjust the asset lives for these assets when setting prices, and maintain standard asset lives. This would have been inconsistent with the IMs which set out that the life of an asset is “the remaining service life potential determined as of its commissioning date by an airport”<sup>53</sup>.

Importantly this change is Net Present Value (“NPV”) neutral, in that over the long-run the net present value of the cash-flows for Auckland Airport would be the same if standard or accelerated asset lives were adopted. Auckland Airport opted to adopt accelerated asset lives as this was what was most consistent with the IMs, in that the useful life of the assets reflects their expected useful life at the time of commissioning.

<sup>52</sup> May consultation documents, p. 13

<sup>53</sup> Commerce Commission, “Airport Services Input Methodologies Determination 2010”, (December 2020), p.24, para 3.6 (2)(d)(ii)

### **IP Q3. To what extent does the demand forecast provided by Auckland Airport in its PSE4 disclosure, reasonably reflect expectations for future demand and why?**

In Auckland Airport's PSE4 PSD, it set out the process it undertook to set the demand forecasts for PSE4, which was to commission independent expert, DKMA, to develop a set of unconstrained demand forecasts. These unconstrained forecasts were then adjusted based on the latest information on the demand recovery to align to the Auckland Airport budgeting process, applying the estimated impacts of price elasticity demand, and the removal of non-billable passengers from the forecast. Below is further detail on these processes, and why these forecasts are reasonable.

#### *Price freeze given demand uncertainty*

A key reason for the price freeze in FY23 was the uncertainty of the recovery of demand at the time. During the period where consultation with airlines would be well underway, Auckland was in lockdown with border restrictions applying to both domestic and international traffic. The outlook was highly uncertain, which could have resulted in forecasts with significant risk for both Auckland Airport and airlines. It would have also resulted in price increases while airlines were still recovering from the pandemic.

To avoid these added complications, and to ensure that the demand forecasts used for PSE4 prices were fair and reasonable, Auckland Airport, with the support of Air New Zealand and BARNZ, opted for the price freeze approach.

#### *Unconstrained forecasts by DKMA*

As was noted in the PSE4 PSD, Auckland Airport commissioned DKMA as an independent aviation forecasting specialist to prepare unconstrained passenger and air traffic forecasts. By having an independent expert develop the demand forecasts was to ensure that these forecasts were objective, fair and unbiased. Auckland Airport then consulted with Substantial Airline Customers on the forecasts produced by DKMA, and asked DKMA to consider this feedback before arriving at the final forecasts developed by DKMA for PSE4 aeronautical pricing.

Having completed its forecasting process and considered airline feedback on its forecasts, DKMA noted the following:

*In summary, as it stands today the forecast is tracking reasonably close to the actual figures, the airlines have no fundamental disagreement with the forecast, and the forecast assumptions made a few months ago remain valid today which suggests that overall the forecast is credible.<sup>54</sup>*

This assessment from DKMA gave Auckland Airport confidence that the unconstrained forecast provided by DKMA on which the demand forecasts were based was fair and reasonable.

#### *Updates to reflect the latest available outlook*

In the PSE4 PSD Auckland Airport set out how the DKMA forecasts were updated to align with the latest available information at the time of setting prices. These adjustments were made to reflect the expected out-turn of passenger numbers for FY23, and the Auckland Airport for the FY24 Budget. This latest information was not available earlier in the consultation process when DKMA undertook its detailed study. These adjustments had the impact to increase the overall number of passengers in the forecast, with an increase to the international forecast, offset by a smaller decrease in the domestic passenger forecast.

As overall passenger numbers were increased through these adjustments, and international passenger numbers (which have higher charges) were increased, these adjustments reduced the average aeronautical passenger charges in PSE4.

Importantly, the application of these adjustments had the impact of reducing Auckland Airport's profitability over the PSE4 pricing period, relative to the independent forecast provided by DKMA. These adjustments were consistent with the principle of including the latest available information in the forecasts that were used to determine setting prices.

#### *Price elasticity of demand*

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<sup>54</sup> DKMA Forecast study – airline feedback, p. 5

Auckland Airport set out in the PSE4 PSD how it considered price elasticity of demand during the consultation process, namely:

*During the consultation process, airlines raised the issue of the price elasticity of demand, citing the potential impacts that increases in airport charges could have on airfares and passenger demand. Auckland Airport commissioned aviation industry economics experts InterVISTAS to undertake analysis on the potential impacts on future demand of Auckland Airport's forecast aeronautical charges, assuming airlines passed these charges on through higher airfares.*

*InterVISTAS are considered experts on this topic, having undertaken analysis for both airlines and airports over an extended period of time. Its previous Demand Elasticities report undertaken for IATA is widely cited in the aviation industry.*

*The InterVISTAS analysis presented the impacts based on 60% and 100% range of pass-through of forecast aeronautical charges into higher airfares. To elasticity-adjust DKMA's unconstrained demand forecast, Auckland Airport adopted the 80% mid-point of this range.*

*Airlines also submitted a separate study into demand impacts. Having carefully considered the findings of both studies, Auckland Airport considers that the approach adopted in the InterVISTAS study was highly robust, and that the study provided by airlines overstated the likely reduction in demand from changes in airport charges. Therefore the findings of the InterVISTAS study were adopted in adjusting the demand forecast for PSE4.<sup>55</sup>*

In addition to what was released in the PSE4 PSD, Auckland Airport considers the following areas of feedback received from airlines through the consultation are relevant in the context of this review. This feedback included:

- the view that price elasticity of demand impacts would be greater than those modelled by InterVISTAS;
- that pass-through below 100% was not appropriate, especially on domestic routes, and questioned the 80% mid-point assumption adopted by Auckland Airport as being too low; and
- the impact on the lowest airfares or sale airfares was not considered by InterVISTAS, that the use of average fares by InterVISTAS would deliver unreliable results, and that elasticity impacts based on sale fares only gave a better indication of impacts on demand, an approach adopted by a separate elasticity study undertaken for the airlines.

All of this feedback from airlines suggested that InterVISTAS' forecast demand dampening was too low, and that the demand elasticity impacts of increases in aeronautical charges should be greater. The feedback received from airlines was provided to InterVISTAS (with the exception of the airline elasticity which was provided under strict confidentiality), which having considered this feedback deemed that its approach and findings remained valid. Accordingly, Auckland Airport maintained the use of the demand elasticity impacts estimated by InterVISTAS for PSE4.

In the context of this review, Auckland Airport notes that if the demand elasticity impacts were increased in line with the feedback from airlines, then relative to the PSE4 pricing decision this would have had the effect of reducing the demand forecasts further and increasing aeronautical prices. This would have resulted in higher profitability for Auckland Airport.

Auckland Airport did not do this, instead it adopted what it considered to be the most reliable and accurate estimates of elasticity impacts to the demand forecasts, consistent with the principle throughout this pricing decision of applying the most recent and reliable inputs to determine aeronautical prices.

#### **IP Q4. Is the two-way revenue wash-up reasonable?**

The impact of the COVID-19 pandemic demonstrates the downside asymmetric risk that airports face, and that it is quite possible for traffic volumes to fall significantly - by close to 100%. This demand risk is asymmetric, as it is not plausible that there would be a similar upside risk to traffic forecasts, i.e. that they would outperform close to double the expected forecast.

<sup>55</sup> Auckland Airport, "Price Setting Disclosure", (August 2023), p. 89

This issue for airports was considered by the Commission as part of the 2016 IM review, where the Commission noted:

*There is the potential for businesses to face asymmetric risk (e.g., catastrophic risk, stranding risk) and this can be compensated for in different ways. One option would be to add a margin to the allowable rate of return to compensate for asymmetric risk. This would potentially increase the targeted rate of return above the WACC estimate.*

*Although we are open to this type of approach from airports, we have often considered compensating for these types of risk through other types of adjustment mechanisms (e.g., cash-flows adjustments, front-loaded depreciation, and ex-post pricing adjustments). Another option is to take into account asymmetric events through input forecasts (e.g., adjustments to forecast demand).*

*Whichever method is chosen, an airport would need to demonstrate that the compensation for any asymmetric risk is consistent with the expected costs of those risks. Namely that there is a material truncation of returns on the upside and no protection for downside risks.<sup>56</sup>*

The Commission has more recently taken steps to address asymmetric business risk when setting prices for fixed-fibre-line services under Part 6 of the Telecommunications Act and deliberation on setting price controls for gas pipeline businesses.<sup>57</sup>

The ‘two-way revenue wash-up’ or asymmetric risk wash-up that Auckland Airport has designed is consistent with how the Commission has previously contemplated asymmetric risks should be compensated for, by adopting the ex-post pricing adjustment approach described by the Commission above.

As the triggers for the wash-up introduced by Auckland Airport are symmetrical, they apply equally on the upside, and the downside, fairly compensating Auckland Airport or airlines for any asymmetric risk that causes revenue or returns to fall outside these boundaries.

#### *Wash-up design provides conservative protection for asymmetric risk*

CEG considered the wash-up mechanism proposed by Auckland Airport. CEG found that the wash-up mechanism design was assessed to be relatively conservative in insulating Auckland Airport from asymmetric risk, and offered far less protection than was adopted by the UKCAA for Heathrow:<sup>58</sup>

*AIAL would still be exposed to asymmetric risk but the proposal is simply that, beyond some level of reduction in demand/revenue, AIAL would be able to recover further losses from customers.*

*AIAL would only be partially protected from extreme events. For example, if the threshold was a 15% reduction in passenger numbers then AIAL would still be exposed to losses when:*

- *Passenger demand fell by less than the threshold. For example, if passenger demand fell by 14% then AIAL would bear the full cost of this event;*
- *Passenger demand fell by more than the threshold. For example, if passenger demand fell by 30% then AIAL would bear at least a half (15%/30%) of impact of this event.*

*AIAL is at least 10 times more exposed to the pandemic event than the UKCAA modelled when estimating compensation for asymmetric risk (for Heathrow).*

*Of course, this conclusion that AIAL has one tenth the insulation as HAL is only relevant to a large shock of the kind modelled here. For smaller shocks that do not trigger the AIAL threshold, AIAL has zero insulation compared to at least 50% insulation for HAL. Thus, on average, the level of insulation provided to AIAL from its wash-up mechanism is much less than one 10th the level of insulation afforded HAL.*

<sup>56</sup> Commerce Commission, “Input Methodologies Review Final Decision – Topic 6 WACC Percentile for Airports”, p.19

<sup>57</sup> Commerce Commission, “Fibre Input Methodologies Main Final Decisions Reasons Paper”, 13 October 2020, p. 545 and “Resetting Default Price-Quality Paths for Gas Pipeline Businesses from 1 October 2022 Process and Issues Paper”, 4 August 2021 p. 81

<sup>58</sup> CEG, “AIAL asset beta and WACC estimates for PSE4”, (February 2023), p. 50; CEG, “Review of feedback on AIAL WACC estimates for PSE4”, (May 2023), p.21 and 22.



The conservative design of the wash-up mechanism can be demonstrated using the COVID-19 pandemic as an example. The pandemic caused PSE3 revenue to be 32% lower than forecast (versus the 15% trigger), resulting in an Internal Rate of Return (“IRR”) 3.58% lower than target (versus the 0.75% trigger). If the wash-up mechanism applied for PSE3, the maximum washup into the next pricing period would have been capped at a maximum of around half of Auckland Airport’s pandemic losses (i.e. equal to  $32\% - 15\% = 17\%$ ).

*Does the revenue wash-up require an adjustment to asset beta*

As noted previously in section 4.1, careful consideration must be given when assessing the impacts of two-way revenue wash-up to address asymmetric risk, particularly including their interaction with systematic risk, as measured by the asset beta.

CEG considered this question, including whether the wash-up mechanism should affect the asset beta estimate used by Auckland Airport when setting the cost of capital. CEG observed that Auckland Airport’s asset beta can be expected to be higher than that of the comparator sample for the following reasons:

- its observed asset beta had over a long period of time been consistently above the comparable company average;
- its pricing period of five years is much longer than other airports in the sample which increases risk; and
- Auckland’s passenger traffic diversity is materially lower than many of the major hub airports in the comparator sample.

CEG also found that there were risk sharing mechanisms already in place at other airports that were included in the airport comparator sample, meaning that the introduction of this mechanism meant that Auckland Airport’s risk profile more closely reflected that of the airports in the comparator sample with the introduction of the wash-up. Considering these findings, CEG concluded:<sup>59</sup>

*It is therefore reasonable to assume that AIAL’s asset beta risk will remain at or above the average for the NZCC sample. Therefore, AIAL’s proposed use of the sample average asset beta remains reasonable and, arguably, conservative.*

In other words, as the asset beta adopted to set the target return reflects the average of a sample of comparator airport companies, the relative systematic risk of these companies, including any risk sharing mechanisms that they have in place is highly relevant when assessing Auckland Airport’s asymmetric risk revenue wash-up. A comparison of the overall level of systematic risk of Auckland Airport to the companies in the comparator sample is the appropriate way to assess these impacts. Accordingly, as this mechanism was considered to reduce the difference in risk between Auckland Airport and the sample, no adjustments were considered to be required.

## **4.2. Investing in assets appropriately**

The PSE4 PSD set out Auckland Airport’s plans for \$6.7 billion of aeronautical investment over the 10 years to June 2032. This capital investment plan has been developed over an extended period of time, with consultation first commenced on DTB options in 2012. The plan has been subject to extensive analysis, planning, consultation and feedback from stakeholders including airline customers.

Having completed this analysis and undertaken these processes, this investment plan is the one that Auckland Airport considers best meets the needs of passengers, consumers, users of the airport, and the New Zealand economy. Auckland Airport considers that it is best placed to make these investment decisions, the carefully calibrated ID regime for airports aligns its incentives to invest with the long-term benefit of consumers.

In the PSE4 PSD, Auckland Airport set out extensive detail on the benefits of its capital investment plan and the thorough consultation undertaken in developing its investment plan. Auckland Airport does not seek to repeat this information here, but it does consider that the Commission can take comfort in the thorough approach it has undertaken in developing its capital investment plan, consulting with airline customers, combined with the incentives of the current regulatory regime for Auckland Airport to make the best capital investment decisions in the long-run interests of consumers.

<sup>59</sup> CEG, “AIAL asset beta and WACC estimates for PSE4”, (February 2023), p. 57

Auckland Airport responds to the specific questions in the Issues Paper related to investing in assets appropriately, and the process to assess this below.

### **Proposed approach to assess whether investment in assets is appropriate**

Auckland Airport supports the Commission's proposed approach to assess its plans to invest principally based on the information outlined in the PSE4 PSD. The capital investment appendix included in the PSE4 PSD set out a detailed set of information which explained the investment rationale for the capital investment plan. Given the detail provided, Auckland Airport agrees that this should be largely sufficient to inform the Commission's assessment.

This is appropriate because the development of the 10-year capital investment plan is inherently complex. The conclusions and assessments set out in the PSE4 PSD are a summary of the detailed and complex processes that are undertaken that consider future requirements, constructability, timing, cost, alternatives, meeting compliance requirements, and considering the needs of various stakeholders including Substantial Customers through consultation.

It is the role of Auckland Airport to then consider all of these factors, and make what it considers to be the best decision. The Commission can take comfort that the ID regulatory regime for airports, as designed, incentivises Auckland Airport to make these investment decisions in a way that is consistent with the long-run benefit of consumers. The Commission can take further comfort in the robustness of the extensive consultation processes with Substantial Customers, as was set out in the PSE4 PSD. However, Auckland Airport also notes that the incentives of airlines are not necessarily aligned to these same long-term interests, and the Commission should take this into account when undertaking its assessment.

Accordingly, Auckland Airport does not think it is the place of the s53B review to attempt to re-litigate the outcomes of the consultation with airline customers. Auckland Airport considers that it has the right processes in place, supported by clear information disclosure, to demonstrate that it is seeking to invest at an efficient level for the long-term benefit of consumers. For PSE4, this has resulted in comprehensive disclosure of the forecast capital plan for PSE4 and PSE5. Further, consultation will continue through the next five years as Auckland Airport work through the next stage of design processes, ahead of actual investment.

### **IP Q5. Is Auckland Airport investing in its assets appropriately and at a quality standard that reflects consumer demands?**

The PSE4 PSD set out why a step-change in infrastructure investment is needed at Auckland Airport, that is to ensure the airport delivers a reliable, resilient, safe service that meets the expectations of users, and caters to future demand and capacity requirements.

Auckland Airport considers that the PSE4 PSD includes sufficient information for the Commission to consider this question, however it elaborates further below on points of emphasis that may assist the Commission in this review.

#### **Assessing the benefits of capital investment**

The quality of the investment in assets at the airport can be best described in terms of the of the benefits those assets will bring. The planned projects will provide an airport that is safe, regulatory-compliant, delivers needed airport capacity, supports resilience of airport services, enhances customer experience, and supports delivery of Auckland Airport's sustainability targets. The PSD described the benefits to consumers of delivering projects in the capital plan into five broad categories which are summarised below:<sup>60</sup>

- **safe and compliant** – operating a safe and compliant airport is a non-negotiable, the capital plan includes significant investment in the renewal of end-of-life assets to ensure the safe ongoing operations of the airport;
- **airport capacity** – the Terminal Integration Programme unlocks the future growth pathway aligned to the Auckland Airport Master Plan, delivering this capacity to meet future demand will enable airline competition which gives consumers choice and keeps downward pressure on airfares;

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<sup>60</sup> Auckland Airport, "Price Setting Disclosure", (August 2023), p.26-28

- **airport resilience** – investing to improve the resilience of airport operations, to ensure the airport can provide a consistent and reliable service to consumers;
- **customer experience** – the investment in new assets will enhance the customer experience across all elements of the airport system, from investment in roads that will reduce travel times, to upgrades of the existing DTB, and of course the new Domestic Processor – these new projects all seek to enhance the experience for all users of the airport system; and
- **sustainability** – Auckland Airport’s net zero target by 2030 is to be achieved through the capital projects it is delivering. Auckland Airport works alongside local iwi on the design of projects across the precinct, and the investment in the precinct is a driver of job opportunities for the local community.

### **Delays to investment caused by the pandemic**

The COVID-19 pandemic was highly disruptive. It closed both domestic and international borders and required people to stay at home, with aviation one of the most impacted industries. The disruption caused by government policy responses to the pandemic included inflationary pressures becoming common globally, and a step-change increase in construction costs.

Investment during PSE3 was significantly impacted by the pandemic, and while most aeronautical projects remained on hold, Auckland Airport re-examined its long-term aeronautical infrastructure development plans to ensure they were appropriate for the post-pandemic world. This exercise confirmed that Auckland Airport still requires a new DTB facility and identified the optimal location and pathway to delivering this critical infrastructure.

When assessing Auckland Airport’s investment plan, the impacts of the pandemic - namely delays and the significant increase in construction cost escalation – should be considered by the Commission as it undertakes its assessment.

### **Planning to deliver the long-term infrastructure required**

It is Auckland Airport’s role, as the operator of the airport, to consider the needs of all airport users. That goes beyond airlines, and includes passengers and border agencies. As an infrastructure owner, it also needs to make decisions to deliver the facilities that will meet the variety of needs over the long-term.

At the heart of Auckland Airport’s ten-year aeronautical investment plan is the terminal integration programme. This investment will enable the relocation of domestic jet services from the existing DTB into the new integrated facility, enhancing customer experience and unlocking additional domestic capacity to meet long-term demand forecasts. Given its location, transitioning out of the DTB is an essential step in the Master Plan to be able to deliver the long-run capacity that will be required at Auckland Airport.

Ensuring Auckland Airport is able to meet these long-run capacity requirements is to the benefit of consumers. As recently demonstrated following the pandemic, aviation capacity shortfalls can significantly increase airfares. By ensuring that Auckland Airport has the capacity to meet future demand, this will enable competition in the market which gives consumers choice and puts downward pressure on airfares.

### **Passenger surveys inform Auckland Airport’s investment plans**

Auckland Airport’s primary independent measure of passenger satisfaction is the Airport Service Quality Survey (“**ASQ**”). Auckland Airport conducted in-terminal surveys throughout the year in line with the sampling guidelines prescribed by Airport Council International. The results of these surveys form part of the annual ID requirements, and accordingly are published annually with Auckland Airport’s ID releases.

ASQ scores for domestic terminal services sit well below the benchmark set by a custom panel of comparable airports.<sup>61</sup> This has identified the need for additional investment to better meet customer needs. In the short term, this feedback is informing the upgrades of the DTB but given the limitations to what can be improved within the existing building also informing improvement to the Terminal

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61 Auckland Airport Disclosures FY23 commentaries, section 14.2

Integration Programme which will provide for a new domestic terminal and alleviate many of the challenges that exist with the current facility.

### **4.3. Efficiency of forecast expenditure**

Auckland Airport's forecast expenditure is efficient and reasonable. The capital and operational expenditure plans are developed through robust processes and in consultation with Substantial Customers.

The approach to delay capital spending and pricing decisions during the COVID-19 pandemic helped to mitigate the impacts of the significant volatility caused by the pandemic. This included the price freeze proposal, which saw the PSE4 pricing decisions delayed by 12 months as border restrictions eased and the demand outlook became more certain. But even with the price freeze it was still a highly uncertain outlook by normal standards, with the PSE4 forecasts developed in a highly volatile cost environment. This combined with construction cost escalation, and general cost inflation introduced significant volatility in developing the forecasts used to determine aeronautical prices.

Operational expenditure is also reasonable, benchmarks well to other airports, and will continue to benefit from economies of scale as demand ramps up following the COVID-19 pandemic. The cost of projects is determined based on a detailed costing approach, as per standard industry practice. The timing of capital expenditure within the capital investment programme also undergoes significant analysis and consultation to the timing is aligned to the future demand outlook and timelines required to deliver what are often complex projects in a brownfield environment.

Auckland Airport also recognised that the significant capital expenditure programme created increased delivery risk. Therefore, it proposed the capex wash-up mechanism in order to help protect the airlines from being over charged in the event of under delivery. The one-way nature of the mechanism ensures that Auckland Airport continues to have the right incentives to deliver projects efficiently and cost effectively. Auckland Airport considers the Commission should take comfort in the introduction of the capex wash-up when assessing the accuracy of the capital investment forecasts.

Auckland Airport responds to the proposed process and specific questions in the Issues Paper related to the efficiency of forecast expenditure below.

#### **Proposed approach to assess efficiency of forecast expenditure**

Auckland Airport agrees with the Commission's approach in assessing the PSE4 expenditure forecasts. Auckland Airport also agrees with the Commission that the introduction of the capex wash-up mechanism should provide some comfort when assessing the approach used to forecast both the cost and timing of capital expenditure.

#### **IP Q6. Do the level and timing of forecast capital and operational expenditure for PSE4 appear reasonable?**

Further detail on why Auckland Airport's expenditure forecasts are reasonable is outlined below.

##### **Price freeze**

After considering the feedback provided by Substantial Customers on the price freeze consultation that started in June 2021, in January 2022, Auckland Airport decided to hold aeronautical prices flat for the 2023 financial year at 2022 financial year prices,<sup>62</sup> and to delay the PSE4 price reset by a year. A key reason for the price freeze in FY23 was the uncertainty of the recovery of demand at the time. The outlook was highly uncertain, which could have resulted in forecasts with significant risk for both Auckland Airport and airlines.

As part of the consultation on the price freeze, Auckland Airport provided a proposal to Substantial Customers, setting out how the price freeze would work. This specified that while prices were held flat for the 2023 financial year, when setting prices for PSE4 the inputs into the building block pricing model for the price freeze year would be based on the estimated actual results for the year, whilst still setting prices to achieve the target return across the five-year pricing period. This proposal

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<sup>62</sup> But with the \$2.00 / international pax plus Goods and Services Tax ("GST") Regulatory or Required investment ("RRI") charge discontinued

for the price freeze was supported by both Air New Zealand and BARNZ. This approach demonstrates Auckland Airport's commitment to reasonable, fair and accurate forecasts being used to set aeronautical charges, even where it results in the deferral of significant amounts of revenue.

### **Capital expenditure**

The capital expenditure forecasts for PSE4 are reasonable. The plan is developed based on a robust process based on Auckland Airport's development principles and design objectives, and informed by the Auckland Airport Master Plan. The timing of projects is informed by forecasts of future demand, and the expected timeline to deliver specific projects.

The PSE4 capital investment forecasts were developed during a period of great volatility due to the disruption caused by the pandemic. Not only did the pandemic disrupt aviation demand, it also resulted in material increases in construction cost inflation, both in New Zealand and globally.

Disruption to supply chains, labour constraints, structural changes to the Tier 1 contractor landscape and geopolitical factors resulted in unprecedented difficulty in estimating the cost of delivering large projects in New Zealand, as construction cost escalation reached levels not seen since the mid 2000's.

Given the significant step-up in investment, Auckland Airport acknowledged that this would introduce increased risk to the deliverability of a significantly larger capital investment programme, and on its own initiative introduced the one-way capex wash-up to the benefit of airlines if capital investment falls materially below forecast. Without this wash-up, Auckland Airport could benefit with returns materially above target because it has failed to deliver capital investment to forecast. Introducing this wash-up avoided this situation.

The PSE4 PSD set out the process Auckland Airport used to determine the capital investment plan. This included setting out the development principles and design objectives that have informed the planning process, and how the demand forecasts used to inform the capital investment plan were developed. Auckland Airport also set out the extensive consultation process undertaken which informed the capital investment plan.<sup>63</sup> The PSE4 PSD did not set out in detail the process that was used to determine project costs, further detail on this process is explained below.

#### *Developing project cost estimates*

The cost estimates of capital projects were based on Auckland Airport's current understanding of required project scope or planned renewal activity. Project cost estimates for specific infrastructure projects are informed by advice from external cost estimators based on the scope and requirements supplied to them by Auckland Airport. Cost estimates reflect the holistic cost of designing, constructing and commissioning assets into operational use and include all ancillary costs such as consenting, project management, construction monitoring and holding costs. Cost estimates for ongoing business as usual renewal and minor upgrade activity are based on historic levels of activity adjusted for inflation with specific overlays for one-off projects as required.

Projects already in construction and ones that are nearing completion of detailed design have the highest degree of cost certainty, while projects that are yet to be fully scoped or have had minimal design activity have the lowest level of cost certainty. The cost estimates contained in the capital plan vary depending on where each initiative is in its project lifecycle. Overall cost certainty in the Capital Plan is assessed to be "P50", i.e. the likelihood of the final cost outturn either exceeding or being less than these estimates is evenly balanced, 50/50 either way.

This process determined the real or current day cost of delivering projects, nominal project costs were then determined informed by construction cost escalation forecasts. Cost manager Rider Levett Bucknall ("**RLB**") examined a range of factors to best derive a construction cost escalation forecast for several types of building activity relevant to Auckland Airport works, which was used to forecast construction cost inflation of projects in the capital plan.

### **Operational expenditure**

The operational expenditure forecasts for PSE4 prices are reasonable, particularly in the context of the impact of the pandemic, and the volatility it introduced. In the initial pandemic response significant short-

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<sup>63</sup> Auckland Airport, "Price Setting Disclosure", (August 2023), p. 28-36

term cost savings were implemented to protect financial viability as borders were closed and revenue decreased significantly.

As demand ramped up again so did the operational requirements, at a time when broader economic pressures including labour shortages and cost inflation all combined to create a volatile cost environment. Despite this volatility, the return of real operational expenditure per passenger to pre-pandemic levels over the forecast period reflects an efficient outlook for operations as economies of scale return with passenger numbers.

The PSE4 PSD set out detail on the process used to determine the operating expenditure forecasts and the outcomes of that process. It set out the cost drivers used to inform the forecast including headcount, passenger growth, and forecasts of non-tradeable inflation by the New Zealand Treasury, how Auckland Airport's operational costs benchmark favourably with other airports, and that forecast real operating costs per passenger are forecast to return to pre-pandemic levels by the end of the PSE4 pricing period.

### **IP Q7. Is the capex wash-up mechanism reasonable?**

The introduction of this mechanism for PSE4 is reasonable and supports the current regulatory settings. As set out in the PSE4 PSD, given the significant increase in capital expenditure forecast over the PSE4 pricing period, this increased the risk of the ability to deliver to the capital investment forecasts:<sup>64</sup>

*Auckland Airport has adopted a capex washup in PSE4 that is one-way, and can only favour airlines. This has been adopted at Auckland Airport's initiative, given the very large increase in forecast capital expenditure over PSE4 versus Auckland Airport's historic capex rates, the deliverability challenges that this material capex increase poses, and the resulting potential for Auckland Airport to materially exceed our Target Return for PSE4 by under delivering versus the commissioned capex forecast.*

The design of this wash-up is reasonable for Substantial Customers because it only applies one-way to the benefit of airlines, in the event that Auckland Airport materially under-delivers on its capital investment forecasts. It avoids a potential situation where Auckland Airport could receive materially higher returns where it has not delivered its investment to plan. The regulatory regime does not envisage that airports would benefit in this way, therefore this potential situation has been rectified through the introduction of this wash-up mechanism.

By keeping the wash-up one-way, and not providing Auckland Airport any compensation if investment exceeds forecasts, this ensures that Auckland Airport continues to have the right incentives to deliver projects efficiently and cost effectively.

Auckland Airport considers the thresholds of 7.5% of capex spend and 0.75% higher IRR strike the right balance to maintain the right incentives to minimise costs of projects in the plan, and ensuring Auckland Airport does not benefit where there is an under-delivery of investment. By using a NPV neutral wash-up into the next pricing period, this achieves the same outcomes but avoids the complexity involved with an in-period price reset.

This wash-up mechanism was instigated by Auckland Airport in acknowledgement of the material step-up in capital investment planned. Its introduction was supported by Substantial Customers during the pricing consultation process.

## **4.4. Pricing efficiency and innovation**

The pricing structure at Auckland Airport has matured over time. This pricing decision was the fourth PSE, and the pricing structure reflects one that customers understand and are comfortable with. However, Auckland Airport continues to assess its pricing structure to ensure it remains efficient and fit for purpose. Minor changes in this pricing decision included alignment of the International Passenger Charge and Transit Passenger Charge, and changes to parking exemptions for domestic freighters to encourage more efficient use of scarce airfield capacity.

Innovation is an ongoing process, embedded across airport operations on a day-to-day basis, to enable the development, design and planning of future airport infrastructure. Successful innovation in the airport environment requires collaboration across the different members of the airport community

<sup>64</sup> Auckland Airport, "Price Setting Disclosure", (August 2023), p. 13

including airlines, ground handlers, and government agencies. While Auckland Airport plans for the future and looks to advances in technology to generate efficiencies, it also must consider and plan for the legislative requirements that exist for border and security services when planning future airport operations.

Auckland Airport responds to the specific questions in the Issues Paper related to the price efficiency and innovation, including the proposed approach for assessment below.

### **Proposed approach to assess pricing efficiency and innovation**

Auckland Airport supports the approach proposed by the Commission to again consider pricing efficiency in this section 53B review, and welcomes the inclusion of innovation which was not considered in PSE3. Auckland Airport considers that it is necessary for all four areas of performance identified in the Part 4 purpose statement to be considered in order to meaningfully assess whether Auckland Airport's performance is consistent with Part 4.

Accordingly, Auckland Airport welcomes the consideration of innovation as part of this review. Auckland Airport agrees that innovation should be assessed based on information included in annual ID releases and relevant information provided in the PSE4 PSD – as should all areas of performance under the Part 4 purpose statement.

### **IP Q8. Are there any concerns that the prices set by Auckland Airport are not efficient?**

Auckland Airport seeks to set prices that reflect the costs driven by the consumption of its services, and which reflect the application of efficient pricing principles. Set out below the steps that have been taken for this pricing decision to ensure that prices are efficient.

#### **Price structure**

There were no major changes to the price structure from PSE3. The most notable change was the alignment of the Transit Passenger Charge with the International Passenger Charge, consistent with standard practice at other airports. Auckland Airport also set the Runway Land Charge to \$0.00 given the delays to the expected timing of the construction of a second runway.

Auckland Airport sought feedback from Substantial Customers on its overall pricing structure during consultation. Overall, customers supported the current framework of charges, and noted that with the exception of aircraft parking, the structure is simple and relatively easy to administer, and appropriately allocates charges to users of the various services and facilities.

Auckland Airport considered options to improve the efficiency of the existing pricing structure, and consulted with airlines on potential changes. These included peak period pricing, and options to minimise potential price elasticity of demand impacts. Having considered the feedback through this process Auckland Airport opted not to introduce any further changes to the pricing structure for PSE4.

#### **Domestic freighter parking exemption**

Changes to the domestic freighter parking exemption have been introduced, as a price signal to incentivise more efficient use of scarce aircraft stand capacity on the airfield. Aircraft stand capacity is forecast to become capacity constrained during PSE4. These constraints are driven not only by growth in aeronautical demand, but also due to the construction programme as part of delivering the Terminal Integration Programme.

The location of the future Domestic Processor is currently occupied by a number of remote aircraft stands, these stands are used remotely as they are not serviced by boarding gates and are currently used by both passenger and freighter aircraft. These stands will no longer be available when this area of the airfield is handed over for construction.

While the loss of these stands will be offset with new stand capacity that is being delivered north of the International Terminal, forecasts indicate that there will still be constraints on aircraft stand capacity. This exemption was amended to introduce a price signal to avoid domestic freighter aircraft being parked on stands for extended periods of time. The changes to this exemption will not come into effect until 1 July 2025, giving operators advanced notice of the changes to enable them to consider the implications for their operations.

## **IP Q9. Is Auckland Airport being innovative?**

Innovation is embedded across all activities of the Auckland Airport business, from infrastructure planning, to capital delivery and airport operations. The ID regulatory framework for airports encourages this innovation as airports can benefit from finding efficiencies and reducing costs within pricing periods. This benefits customers in the long-run through lower long-term costs that flow through to lower aeronautical charges. Members of the airport community, including airlines can also benefit through efficiencies for their own operations. Below are examples of innovation across the airport business.

### **Innovation happens every day**

The airport is an ecosystem, where everyone across the aviation system plays a part to make sure it operates as efficiently and effortlessly as possible. There's no single solution for optimising customer experience. It requires a combination of investment in new infrastructure, development of technology solutions, ensuring operations are focused on the right things, and most importantly, ensuring that Auckland Airport collaborate effectively across the entire airport ecosystem to ensure we're all working together.

Every orchestra needs a conductor to stay in time, with key players cued to come in at the right time. The conductor of the Auckland Airport orchestra is the operations centre. Housed in the heart of the terminal, it is the 24/7 hub that keeps the airport operating. It requires a watchful eye to be alert to any issues that might cause delays or inconvenience to travellers, airlines, and the other organisations working in and around the precinct.

The new operations centre has upgraded support technology and created a more modern working environment. Technology enhancements provide a constant feed of data on flight schedules, key functions and processes and passenger flows within the domestic and international terminals. Upgraded public address, audio visual and conference systems make for clearer communications and are more resilient for the 24/7 nature of airport operations.

This new facility has made a material difference to how Auckland Airport collaborates to keep the airport running smoothly, not just between its own people, but also among the other key players in the airport system particularly when dealing with issues or emergencies. Keeping this system running smoothly is fundamental to delivering an experience passengers expect.

Auckland Airport has begun innovating in the frontline staff employment space. The redesign of its workforce to include flexible staffing options allows the airport to add shifts at peak times and have people select shifts that suit them rather than locking people into set shift patterns.

### **Innovation requires collaboration**

Airports are a complicated system where a number of parties have an important role to play in influencing performance across a range of services and facilities, including airlines, government agencies, other third parties, and the airport itself.

Auckland Airport has a number of processes in place to foster a collaborative approach where all parties work together to improve the quality-of-service performance and outcomes across the overall airport system. The Collaborative Operating Group ("**COG**") forums at Auckland Airport airline and inter-agency cooperation in order to improve processes, and increase the quality of service provided at Auckland Airport. These processes served Auckland Airport and airlines well during the challenges that have been presented during the pandemic.

### **Reducing queue times through introduction of new processes**

Auckland Airport is committed to working with all the organisations that make up the arrivals process (airlines, airline ground handlers, Customs and Biosecurity New Zealand) until Auckland Airport gets it right for customers. One step Auckland Airport has taken was the establishment of a taskforce with representatives from across the airport community to identify a number of initiatives to improve customer experience.

A focus of this work has been on reducing queue times, this work resulted in the introduction of dedicated biosecurity lanes for New Zealand and Australian passport holders at international arrivals.



Auckland Airport has also focused on improved use and sharing of data with joint border agencies which can aid passenger processing. Auckland Airport continues to strive to reduce queue times further, but these initiatives have started to have positive impacts, including an approximately 20% reduction in queuing time over the recent peak summer period compared to the previous two months.

### **Supporting more efficient airline operations**

As technology becomes ever more integrated into day to day lives, Auckland Airport is always looking for new ways to innovate to improve operations, improve customer service and smooth out customer journeys.

Auckland Airport is deploying big data and machine learning to help aircraft depart on time while reducing fuel burn. Knowing more accurately when a plane is set to depart helps the Airways tower team to manage departure order on the runway and cuts unnecessary taxiway wait times for aircraft, reducing emissions in the process. More detail is available on page 10 of Auckland Airport's Annual ID.

### **Injecting new technology into the baggage system**

Auckland Airport has commenced construction of the new Eastern Bag Hall. When completed, it will be home to a new integrated domestic and international baggage system featuring modern bag systems that will improve operational efficiency and safety, meet future baggage capacity requirements, increase the resilience of the baggage system. The technology being introduced in the new bag hall will enhance the passenger experience, with early bag store capability giving passengers the choice to check their bags in at any time before their flight.

The Eastern Bag Hall will introduce modern technology into the baggage system. New features such as 'lift assist' and 'batch loader' devices controlled with a joystick will help ground handlers in what is a very physical job. The introduction of this technology will open up employment opportunities in ground handling to more people that might not necessarily be as strong as the traditional ground handler, and also reduces the risk of injury. It will also provide a smarter way to process bags, providing a step change in energy efficiency and supporting Auckland Airport's sustainability objectives.

### **Combined check-in hall creates economies of scale**

The integrated terminal will include an integrated check-in area that services both international and domestic passengers. The combined check-in facility will create economies of scale through the use of common-user check-in facilities that can be used by different airlines. This flexibility will increase the efficiency of the check-in hall, reducing the overall need for check-in facilities as international and domestic peaks occur at different times of the day, this common facility will allow for check-in facilities to be more efficiently utilised.

### **Reducing queue times through introduction of new processes**

Auckland Airport plans for the future, incorporating new technologies into the infrastructure it is planning for the airport. However, Auckland Airport must continue to meet the needs of the wider airport community in the solutions it develops. This includes the operational models of the airport community, and the legislative requirements that stipulate what services they are required to provide and how these services are to be delivered. Auckland Airport takes these constraints into account as it plans for the future infrastructure it is delivering, attempting to recognise future opportunities and incorporating as much flexibility as possible to ensure it is able to capitalise on future advances in technology whilst meeting current requirements.

### **Whakautu (Airport Emergency Services Turn-out solution replacement)**

Auckland Airport is replacing its fire turnout system. The new system will provide critical lifesaving efficiencies and technologies that are needed by the Airport Emergency Services fire brigade, not just today but also to support the expansion of the Airport campus, terminal and runways. The project will deploy a modern digital data driven tool, allowing incident initiators, such as Airways Tower, Landside and Airside Operations teams, Fire New Zealand, to dispatch first responders to incidents as quickly and informatively as possible. This aids in protecting staff, partners and customers and shields Auckland Airport's business from operational outages and passenger delays.

### **IT projects that will enable innovation**

Network 2.0 is a multi-year programme of work with the purpose of providing a modern network that will provide the speed, resilience, visibility and security that is required for an international gateway.

The replacement of the Core Network Switches is the first deliverable component of the wider Network 2.0 programme and will be delivered over the next two years. The core network switches are the critical backbone of all of Auckland Airport's enterprise IT services and data centre networks. The performance of the network relies on the data routed and switched by the core switches. As these core elements age, there is an increasing risk of outages, potentially compromising Auckland Airport data. Replacing the core will not only make the network more secure and easier to maintain, it will also provide a significant increase in speed and capacity for users across the airport precinct.

## Defined terms

The table below outlines the glossary of terms used in this submission.

Defined Term	Meaning
<b>The Act</b>	Commerce Act
<b>AIAL</b>	Auckland International Airport Limited
<b>ASQ</b>	Airport Service Quality
<b>Auckland Airport</b>	Auckland International Airport Limited
<b>BARNZ</b>	Board of Airline Representatives New Zealand (Inc)
<b>Capex</b>	Capital Expenditure
<b>CAPM</b>	Capital Asset Pricing Model
<b>CEG</b>	Competition Economics Group
<b>CEPA</b>	Cambridge Economic Policy Associates
<b>COG</b>	Collaborative Operating Group
<b>Commission</b>	Commerce Commission
<b>DTB</b>	Domestic Terminal Building
<b>FY</b>	Financial Year
<b>GAAP</b>	Generally Agreed Accounting Practice
<b>GST</b>	Goods and Services Tax
<b>IATA</b>	International Air Transport Association
<b>ID</b>	Information Disclosure
<b>IMs</b>	Input Methodologies
<b>IRR</b>	Internal Rate of Return
<b>NPV</b>	Net Present Value
<b>Part 4</b>	Part 4 of the Commerce Act
<b>PAX</b>	passenger
<b>PSD</b>	Price Setting Disclosure
<b>PSE3</b>	Price Setting Event 3
<b>PSE4</b>	Price Setting Event 4
<b>RLB</b>	Rider Levett Bucknell
<b>RRI</b>	Regulatory and Requested Investment Policy
<b>Substantial Customers</b>	as defined in the Airport Authorities Act 1966
<b>TAMRP</b>	Tax adjusted market risk premium
<b>WACC</b>	weighted average cost of capital
<b>2023 Determination</b>	Cost of capital determination for disclosure year 2023 for information disclosure regulation