

Our Ref: 18771

1 August 2001

Stewart Milne  
Executive Director  
Board of Airline Representatives of New Zealand  
PO Box 2779  
**AUCKLAND**

Dear Sir

**Re: AUCKLAND INTERNATIONAL AIRPORT -  
AIRFIELD VALUATION FOR LANDING CHARGES**

Subsequent to the Commerce Commission Draft Report on Price Control Study of Airfield Activities dated 3 July 2001, you have asked us to prepare valuations of AIAL land as at the valuation date June 1999 reflecting the initial findings of the Commerce Commission.

Those findings are laid out by the Commission on Page 10, paragraphs 36 to 40 of the summary report and basically include the following points:

- Land has an alternative use/cost and therefore has an opportunity cost greater than zero.
- Airfield land valued at opportunity cost provides appropriate signals to either continuing to operate the land in its existing airfield use or to put it to an alternative use and relocate the airport.
- Opportunity costs should be based on the highest alternative use value of airfield land but should exclude the cost of getting the land to a stage where it could be used as an airport, such costs to be included in land improvements.
- The relative alternative use may differ from airport to airport and depend on the underlying zoning of the land. Potential alternatives include residential, commercial, industrial and rural.
- The Commission optimised out some land at AIA to arrive at an area that they felt appropriate as a base against which charges could be made.

The focus of the Commission's enquiries at this stage has been to the airfield activities and excludes activities related to the terminals or other surrounding areas.

### **Land Areas and Background**

As a process of the consultation phase, land areas apportioned to various zones were adjusted by AIAL. It would appear that whilst those areas have not been further altered, specific parts are now to be excluded for costing purposes.

We have not been presented with a final summary of the areas but it would appear from various papers presented, that the land now to be included in this valuation is as follows:

<b>Zone as per AIAL</b>	<b>Land Use</b>	<b>Area (Hectares)</b>	<b>\$ Value per Hectare</b>
1	Airfield (Runways, taxiways aprons additional reclaimed seabed)	351.7205	To be determined
1	Airport eastern approaches	170.8081	To be determined
1	Wiroa Island	40.36	To be determined
1	Ground handling	3.1851	To be determined
1	Seawall		No added value
1	Seabed – titled only	140	No added value

- Total areas of land to be included for assessment of landing charges 566.0737 hectares.

The seabed areas and seawall to which AIAL had previously ascribed a value, are after the considerations of the Commerce Commission and advice received from the parties, to be given a nil value (as recommended by the Commission). Any value is either already incorporated or subsumed in the land supported, or of no added value to the administration of the airport due to protections already incorporated in various Acts (seabed).

The eastern approach land is open rural type space, held in a number of titles and largely only purchased by AIAL in the years leading up to 1999.

AIAL in their valuation approach have treated that as a rural type base and with that we have had no argument, although may disagree with the level of value applied to it for rural purposes. Wiroa Island has now been similarly treated.

The airfield land and ground handling areas which form part of that airfield land are now largely one parcel and appear to comprise some 210.22 hectares of natural land, and a further 141.5 hectares of reclaimed land. That combined parcel forms a large level holding extending into the southern tidal reaches of the Manukau harbour.

It is to this parcel that the hypothetical “highest and best” alternative use approaches appear to have or now need to be applied. We point out that the exercise is in isolation of the treatment of eastern approach land which lies closer to other urban development. That is included by AIAL as rural land value for this purpose.

The original AIAL valuation incorporated the airfield land with all the land held for the second runway in its calculation of the highest and best alternative use. They treated it in an urbanised context allowing for a major residential type subdivision. It was assumed that bulk services were available to the edge of the land but then had to be brought through the property in the course of development.

The instruction now given to us is twofold and asks for:

1. An alternative use value for the airfield land on the assumption it is turned into a residential subdivision and
2. An alternative use value if the zoning restrictions and town planning issues that have been discussed in previous reports will not permit a residential subdivision to occur.

From that we have taken the instruction to mean the value of the land in its largely previous form as rural. At best it could be treated as a possible division into small rural landholdings of, say, 12.5 hectares.

**MARKET SALES:**

AIAL's Valuers have researched a considerable number of block sales throughout the Auckland region. For comparative purposes and ease of understanding we have very briefly summarised those sales that lie within the South Auckland areas considered of some influence.

The sales are broadly banded into zonings and areas (10 hectare variations). They are summarised below:

AIRPORT LAND PURCHASES	\$ - '000'S PER Ha	\$ - '000'S PER Ha	\$ - '000'S PER Ha	\$ - '000'S PER Ha \$ -	\$ - '000'S PER Ha \$ -
YEAR	0 – 10 ha	10-20 ha	20-40 ha	40-50 ha	> 60 ha
1991	112		70	67	
1998			117		
1999		93			
<b>HERITAGE &amp; MANGERE – PUHINUI RURAL</b>					
1997	207	45	53	62	
		67			
2000		75			
					62
<b>RESIDENTIAL – MANGERE to PAPAKURA</b>					
1999	291	120			
2000	364				
	208				
	290				
<b>INDUSTRIAL BLOCKS – MANGERE</b>					
1995	189				
1996	300				
1997	301				
1999	487	389			
	272				
	897				

The analysis makes no allowance for any improvements that may have been or remain on site. In some instances they may be of a reasonable quantum. In the purchases by AIAL the improvements may have been of only limited worth to AIAL but do nevertheless remain in place and were of considerable benefit and worth to the vendor.

It will be noted that no sales provided are for lots greater than 50 – 60 ha's the majority for much smaller parcels. **The airfield has an area of 351 hectares.**

The industrial sales are only those within the Mangere area. The highest figure is for a smaller parcel of high exposure land that in the past was identified as commercial and immediately suited to further subdivision.

Given the valuation instruction we do not consider the industrial sales of any particular relevance, but have included them to complete the overall picture.

## **SCENARIO ONE**

### **Residential Alternative Use**

Regardless of whether the residential land block is the 920 plus hectares originally adopted in the AIAL valuation or the 351 hectares to now be included in this airfield valuation, the land block is of considerable size.

Its scale is such that despite a multitude of land block sales in the greater Auckland region that have been researched and canvassed by AIAL valuers, there are none of comparable scale.

Virtually all sales relate to land that is either immediately available for subdivision. Land block sizes are such that one could conceive a development and sale period over not more than a five year time span, and lie within established and developing residential precincts.

The problem that therefore exists is to how to adjust such sales to reflect for the time period over which a developer or landholder must hold a larger parcel of land prior to development.

It is most improbable that a developer would pay the same price for 10 hectares of land that could be developed over the next 3 to 5 year period, for a like 10 hectare parcel of land that would not be developed for at least 15 or perhaps 20 years.

Within the AIAL valuation, for a larger land area, a minimum 20 year development and sale phase was used. Subsequently, during the consultation process this was reduced to 15 years.

The smaller parcel of land now involved, whilst treated in isolation for valuation purposes, cannot be treated in isolation in the district. It could be assumed that if this land was to take a residential use, then neighbouring land in the district would also be similarly treated.

There is therefore the concept that at least 1,000 hectares if not 2,000 hectares may indeed be thrown into the residential market.

In that scenario, development periods of at least 20 years should be adopted. It is quite probable that considerably greater time spans would be involved.

Taking this scenario into account, there is the obvious need for discounting land values over that period of time to arrive at a present day market value.

Like AIAL valuers in adopting this concept, a DCF approach is a recognised tool.

Given the time constraints and our past discussions, we have utilised to a great extent costs and research prepared by AIAL valuers, but with amendments to salient points that we consider are market reflective rather than direct cost reflective.

These points are considered on an item by item basis below:

### **Section Prices**

The land being subdivided is a level plain, exposed to prevailing winds and set above the level of the tidal fringing waters. It has no beach site availability as applies to some neighbouring land. Sites created will be separated from the coast by a coastal reserve strip. The geographical features are such that only those properties that actually fringe the coast would have any view, the rest would be a rather boring level subdivision.

The Mangere area is not one recognised for high residential land values and nor is neighbouring residential land to the east and north as it forms part of Manukau City or Papatoetoe.

We consider the section values would be in the lower price range for the Auckland region and have adopted an average level of \$75,000 net of GST.

### **Number of Sections**

We have assumed the following:

- Land lost to roads, reserves etc. 21.5%
- Commercial land for shopping centre and local shops 2.5% -it may be questionable if a shopping centre was viable.
- Balance to residential 76%

We have assumed on that balance a site development density of circa 16 lots per hectare.

This would create a residential subdivision of some 4,722 sites.

### **Development Period**

Assuming a subdivision would start in the east, and extend through to the west.

The development period would be reflective of the take up of the lots.

We have assumed that:

- The first 12 months would be involved in design and initial engineering phases, therefore no section sales.
- Section sales would commence in the second year and reflect an optimistic 150 lots in that year, i.e. approximately 10 hectares would be developed. Subsequent year sales would depend on the success of the initial stage. We have assumed they would continue to reflect that number of sales until the area gained some acceptance and began to generate its own market, at which time increased section sales and areas of development may occur.

We have completed this scenario over a 15 year phase and over a 20 year phase.

The commercial land sales would not occur until there were sufficient residents to justify a small retail shop development and much later in the programme, circa 10 years out, possibly sufficient residential density to justify a shopping centre development. That in itself may not occur, were such a centre to be created on other land lying beyond the confines of this valuation.

### **Costs**

These have been taken at an identical rate to that utilised within the AIAL valuation. Holding costs reflective only of rates. It is assumed that day to day management costs of the undeveloped land to be treated as a rural type grazing block or similar will be met by income generated from such use.

We have increased sales commissions to 4%.

### **Interest Charges**

No separate amount is taken for interest but are assumed to be self funding beyond Year 2 and the costs of any funding reflected in the discount rate applied.

### **Discount Rate**

This rate also reflects the profit margin and risk associated with the property and must be one reflective of the time span and scale of the project. We have run three scenarios from 25% to 35%.

### **DCF VALUATION**

1. – 15 year develop/sale period

Results provide an average per hectare rate of :

- 25% discount \$117,000 per ha
- 30% discount \$89,000
- 35% discount \$70,000

2. – 20 year develop/sale period

Results provide an average per hectare rate of :

- 25% discount \$87,000 per ha
- 30% discount \$64,000

Those rates are then compared to current day block sales of much smaller parcels imminently due for development.

The best parcel comparisons will have subsequent land section prices likely to be in a similar fold as those adopted in our model. They include the Mangere and West Auckland areas. The hectare rate shows a considerable discount on those smaller hectare rates. That discount is clearly reflective of the time delays and the associated risk in development.

They do result in hectare rates that are above that paid for smaller parcels of rural land in the current market.

Significantly, the results are very similar to the values paid by the airport company when acquiring land between 1991 and 1999, as set out in the table on page 3 of this report. That table demonstrates the airport company paid between \$67,000 and \$117,000 per hectare for land it acquired.

### **Alternative Residential Approach**

An alternative and simple approach in the residential block basis may be to assume a value to the first 10 hectares of land and then to discount that for various parcels over an overall period of 15 years.

Adopting a value to that first 10 ha of \$250,000 per ha = \$2,500,000

Discounting that sum at 11% and reflecting increasing development of land to 20, 30 and 40 ha parcels over a 15 year period results in an end value of \$33,574,000 or \$95,500 per ha.

## **SCENARIO TWO**

### **Rural Land**

The land carries a likely underlying Mangere-Puhinui Rural or Heritage zone.

Subdivision requirements are very restrictive and allow for large lot rural parcels. Under the horticultural rules a minimum net lot area of 12 hectares is called for. A further area of at least 2000 sq.m must also be provided for the house site. Where more than 1 lot is made an average minimum of 16ha is needed.

At best we have anticipated the land has subdivision potential for an average of 12.5ha lots.

That would create 25 parcels for sale.

The development costs are minimal and would only call for a rural road, power and telephone to each lot, subdivision and fencing, road crossings etc.

A development and sale period of only 4 years might be anticipated. Thus risk factors are substantially reduced as is the questionable conjecture that applies to long term, large scale development plans.

Nearby rural lot sales indicate per hectare rates of circa \$40,000 to \$60,000. We have adopted an average lot value of \$625,000 based on a mid-point range of \$50,000 per Ha.

Adopting a similar cash flow approach to the residential value with a staged sell down and development results in the following rates:

- 10% discount \$31,000 per ha
- 15% discount \$27,000

If a 3 year development and sale period is adopted the following results:

- 10% discount \$33,000 per ha
- 15% discount \$30,000

**CONCLUSION:**

The different approaches are summarised in the following table:

**VALUATION RATE per HA COMPARISON**

<b>BASIS</b>	<b>YIELD %</b>	<b>35%</b>	<b>30%</b>	<b>25%</b>	<b>20%</b>	<b>15%</b>	<b>10%</b>
	<b>NO.of YRS</b>	<b>,\$,000'S</b>	<b>,\$,000'S</b>	<b>,\$,000'S</b>	<b>,\$,000'S</b>	<b>,\$,000'S</b>	<b>,\$,000'S</b>
<b>RES.</b>	<b>15 yrs</b>	70	89	117			
	<b>20 yrs</b>		64	87			
<b>RES.BLOCK</b>							95
<b>RURAL</b>	<b>3 yrs</b>					30	33
	<b>4 yrs</b>					27	31

The above rates per hectare should be compared to the brief sales schedule earlier in this report.

They reflect an expected discount to the levels shown for parcels that are only 1.5% to 13.5% the size of the subject. Those sales are also parcels with established road frontages, services available and usually with appropriate zonings for their use or development potential. Where they are development sites they lie in or adjacent to established urban areas and can be developed within a comparatively small time frame.

I consider such sales give support to our acreage values.

Therefore we have drawn the following conclusions to each scenario.

**SCENARIO ONE**

**Residential Alternative Use**

<b>Zone as per AIAL</b>	<b>Land Use</b>	<b>Area (Hectares)</b>	<b>\$ Value per Hectare</b>	<b>TOTAL</b>
1	Airfield (Runways, taxiways aprons additional reclaimed seabed)	351.7205	90,000	31,655,000
1	Airport eastern approaches	170.8081	70,000	11,597,000
1	Wiroa Island	40.36	70,000	2,825,000
1	Ground handling	3.1851	90,000	287,000
1	Seawall			NIL
1	Seabed – titled only	140		NIL
	<b>OVERALL TOTAL</b>	566.0737		<b>\$46,724,000</b>

**SCENARIO TWO**

**Rural Land**

<b>Zone as per AIAL</b>	<b>Land Use</b>	<b>Area (Hectares)</b>	<b>\$ Value per Hectare</b>	<b>TOTAL</b>
1	Airfield (Runways, taxiways aprons additional reclaimed seabed)	351.7205	32,000	11,255,000
1	Airport eastern approaches	170.8081	70,000	11,597,000
1	Wiroa Island	40.36	70,000	2,825,000
1	Ground handling	3.1851	32,000	102,000
1	Seawall			NIL
1	Seabed – titled only	140		NIL
	<b>OVERALL TOTAL</b>	566.0737		<b>\$25,779,000</b>

The 2 different assessments show a considerable variation. The eventual land use base chosen will be as a result of town planning considerations.

Each approach adopted has by our calculations resulted in an answer significantly less than that adopted by AIAL at \$140,000 per ha based on their residential considerations. That difference to a large extent arises from:

- Our view of the impact on land values of large land parcels
- our perceptions of when sites created in the DCF would be become available for a full sale (on title being available),
- the sell down period anticipated,
- to a minor extent the costs of sale and promotion and
- finally the appropriate discount rate to apply that reflects adequately, the long term risks associated with such a hypothetical project.

Yours faithfully  
for and on behalf of  
**BARRATT-BOYES JEFFERIES LIMITED**

**R D LAWTON**  
Dip Urb Val (Hons), SNZPI, MPLENZ  
Registered Valuer