



# Whangarei Airport

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# 1 Introduction

Planning for the future and considering an expanding population base requires the contemplation of future transport and infrastructure needs, including airport operations. Given the objective of the Sustainable Futures Growth Strategy to ensure a planning platform for the Whangarei District to deal with a growing population over the next 30 to 50 years, it is essential to consider the capacity of the Whangarei Airport and its ability to serve the public for the years to come.

The fact that the airport is 50% owned by the Whangarei District Council (WDC) and 50% owned by the Government has, in the past, presented some problems in relation to planning issues for the Council; given its role as airport owner and developer, and enforcement agency for resource management matters. This has led to the instigation of independent studies in order to reconcile the different roles.

The following assessment is partially based on these earlier reports and forecasts for the airport, such as the Whangarei Airport Master Plan (1998), the Master Plan Review (1999), and the Whangarei Airport Operations Review (2003). Where changes have occurred to the airport since these reports were drafted, these have been taken into account.

## 2 Airport role and function

The Whangarei District has, for many years, been served by one (regional) airport, located on the Onerahi Peninsula. The Whangarei Airport is a commuter airport, used for both private and domestic commercial flights (NRC, 2010). It is an important physical resource, serving a local population of around 78,000 people. The airport provides for recreational and economic opportunities, including daily scheduled flights, training facilities, heliport and private use facilities (Beca Planning, 2003, s32).

The main operator at the airport is Air New Zealand Link, with regular flights also undertaken by Salt Air who might operate twice daily on week days.

## 3 Airport features and capacity

The following assessment examines the existing terminal with associated facilities, the existing ground access system, the taxiway/runway system and the airport location and surroundings.

### 3.1 Terminal and facilities

The existing terminal provides many facilities, including airline check-in baggage handling and office space, departure lounge, cafeteria, car rental, restrooms and baggage claim area.

In general, the Airport Master Plan Review assessed the overall size of the terminal to be satisfactory for the levels of operation at the time, even though individual facilities within the terminal varied from being in excess of (i.e. departure lounge, cafeteria and toilets) to being less than (i.e. airline processing and baggage make-up) that which is theoretically required (Beca, 1999).

To date, it appears no major difficulties are being experienced with the terminal facilities, even though the terminal could benefit from reorganization, as identified during the review, in order to improve the layout and space requirements. However, it may be more advantageous to construct a new, larger terminal once demand for its facilities outgrows its capacity (Beca, 1999). It is considered that the current airport premises has ample land available to accommodate such a facility.

### 3.2 Existing ground access system

Apart from a few minor issues such as night time lighting and the provision of a covered walkway and transfer facilities to and from the secure lock-up carpark, the existing ground access system, consisting of

the terminal kerbside, rental car parks, public car parks, staff car parks and airport access road, was judged to be more than adequate for the operations at the time (Beca, 1999).

To date, there appear to be no major issues with these facilities, and some further expansion within the existing site is considered possible should demand increase.

### 3.3 Taxiway/runway system

Whangarei Airport has a single sealed runway with an operational length of 1061m or 1091m depending on whether the runway is used for landing or take-off, respectively. The runway has an associated sealed taxiway which connects the runway with the aircraft apron. The airport furthermore contains a grass runway and two grass taxiways which are mainly used for pilot training, microlight aircraft and helicopter operations.

A recent upgrade of the airport (NRC, 2010) has ensured the airport remains certified to accommodate scheduled airline services for 50 seat capacity aircraft, rather than just cater for the occasional 50 seat charter plane, even though the majority of scheduled flights currently only carry a maximum of 19 passengers.

The capacity of the sealed runway was assessed in the 1998 Master Plan and was estimated to be 70-85 operations per hour in VFR (visual flight rules) and 20-24 operations per hour in IFR (instrument flight rules). The Annual Service Volume (ASV) was estimated to be 140,000 to 160,000 operations per year. Latest figures obtained from the Airport Manager, indicate a total of 18,770 movements for year- end June 2009.

The latest forecast modeling carried out in 2002 and represented in tables 1, 2 and 3 below, foresees a high growth scenario of 45,500 operations (Total Aircraft Activity) per annum by the year 2027 (Beca, 2003). This figure constitutes around one third of the total capacity of the runway system, and would appear to indicate that the airport will be able to serve the District for at least the next 50 years.

***Table 1 - Air Transport Annual Aircraft Activity Forecasts<sup>1</sup>***

<b>Year</b>	<b>Low Forecast 0%</b>	<b>Medium Forecast 3%</b>	<b>High Forecast 6%</b>
2002 - Current	6,400	6,400	6,400
2007 - 5 year horizon	6,400	7,400	8,400
2012 - 10 year horizon	6,400	8,400	10,300
2027 - 25 year horizon	6,400	11,300	16,100

***Table 2 - General Aviation Activity Forecasts<sup>2</sup>***

<b>Year</b>	<b>Low Forecast 6%</b>	<b>Medium Forecast 10%</b>	<b>High Forecast 17%</b>
2002 - Current	5,600	5,600	5,600
2007 - 5 year horizon	7,300	8,400	10,400
2012 - 10 year horizon	9,000	11,200	15,100
2027 - 25 year horizon	14,000	19,600	29,400

<sup>1</sup> Air transport activities denote commercial activities.

<sup>2</sup> General aviation activities comprise private and club flights, microlight activities and helicopter flights.

***Table 3 - Total Aircraft Activity Forecasts***

<b>Year</b>	<b>Low Forecast</b>	<b>Medium Forecast</b>	<b>High Forecast</b>
2002 - Current	12,000	12,000	12,000
2007 - 5 year horizon	13,700	15,800	18,800
2012 - 10 year horizon	15,400	19,600	25,400
2027 - 25 year horizon	20,400	30,900	45,500

*Source: Whangarei Airport Operations Review (Beca, 2003)*

### **3.4 Airport location and surroundings**

The Whangarei Airport is located on an elevated site overlooking the Whangarei Harbour, at the end of the Onerahi Peninsula. The site covers a total of approximately 60 hectares. A ten minute drive takes one into the Whangarei City centre (Beca Planning, 2003, s32).

The surrounding area is characterised mainly by residential development which imposes limits as to noise generation and the physical expansion of airport operations. Due to these expansion limitations, it is unlikely that the airport will ever accommodate jet-planes. Indeed, the 'Draft 30 year Transport Strategy for Northland' recently released by NRC for public comment, does not identify a role for the Whangarei Airport as an international airport. Instead, this role is associated with the Bay of Islands Airport.

The airport's present location, close to the urban area and in close proximity to residential land uses that have grown up with, and around the airport, has both positive and adverse effects. An important positive effect is the short travelling time from the airport to the main urban Central Business District area. A further positive effect is the provision of passenger and freight transport to serve local business, industry and tourism.

The main potential adverse effect of airport activities is noise and its potential effects on nearby residential land uses, although air emissions, safety and traffic effects may also arise. However, these adverse effects can be managed with careful planning, and are not seen as threatening the long-term viability of the airport. Adverse effects from an increase in frequency of flights will be partially offset by the trend towards quieter aircraft in the future.

### **3.5 Other features**

#### **3.5.1 Navigational aids**

The existing navigational aids appear to be adequate to support the projected aircraft operations, provided they are maintained on a regular basis. The Airport Manager has reported that the Visual Approach Slope Indicators (VASI) are earmarked to be replaced with a more modern PAPI system next year.

#### **3.5.2 Traffic control tower**

The Whangarei Airport possesses a traffic control tower facility which was operated until 1988 when the volume of aircraft activity was considered too small to warrant the service. However, the facility remains and the service could be reinstated if and when demand occurs. Although, it seems more likely that a new traffic control tower would be constructed as part of new terminal facilities.

### **3.5.3 Fire rescue facilities**

The original Ministry of Transport fire station building remains located at the airport, adjacent to the tower and terminal. It has easy access to the taxiway and runway system, which is appropriate for the provision of fire rescue services. However, the Ministry sold the building to the Air Training Corps. This would have to be bought back if the fire rescue service was to return. The building would require some maintenance and would need to be fully equipped.

### **3.5.4 Aircraft fuel supplies**

Fuel supplies for the aircraft consist of a 40,000 litre public facility and two 20,000 litre private facilities. So far, these facilities have been satisfactory, but the refuelling of these holding tanks may need to become more frequent as air traffic movements increase. Consideration may need to be given to locating the Air BP Jet A1 tank underground.

## **4 Potential sites for airport relocation**

As part of the 1999 review of the Airport Master Plan, a desktop analysis was undertaken, investigating other sites for the potential relocation of the airport. One of the main requirements was that the new site should be able to accommodate a regional airport with a 1,500m runway length, able to accommodate jet aircraft. The location also had to be within an acceptable distance from the Whangarei CBD.

A total of nine possible future locations were considered. However, a number of limitations including lack of utility provision, topographical intrusions, possibility of flooding and potential noise and safety implication for nearby primary schools and settlements, precluded the majority of sites for further consideration.

The report concluded that only one of the sites satisfied all evaluation criteria. This was the Carter Road, Wilsonville site, located to the north-west of Hikurangi (Beca, 1999). Although this site may possess the necessary attributes for the development of a regional airport facility, the location is somewhat removed from the Whangarei CBD, an advantage held by the current airport.

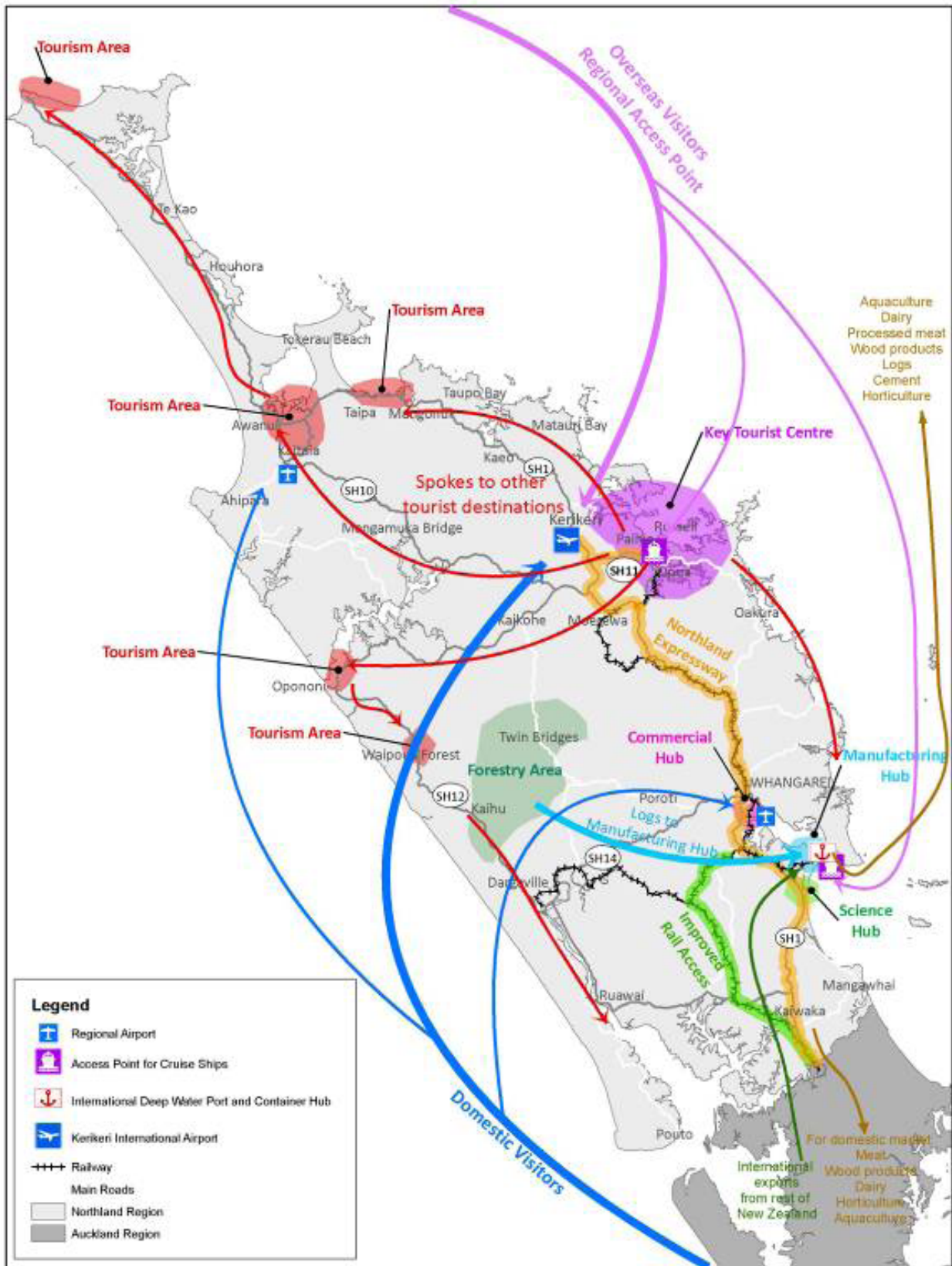
Furthermore, it was considered that the level of growth required to create the demand for a greenfield site was likely to be in the order of a doubling or trebling of the Whangarei District's population (Beca, 1999), a level far beyond any numbers forecast at the time, and still outside of the current growth model for the next 30 to 50 years.

## **5 Draft 30 year transport strategy for Northland**

In January 2010, the Northland Regional Council released the Draft 30 year Transport Strategy for Northland. Figure 1 is a visual representation of this strategy. In the document, the regional council identifies the Bay of Islands Airport as the international airport for Northland, given its current ability to clear passengers through customs for private international flights of up to 12 people, and given its ability to be developed as the gateway to the Bay of Islands.

The Whangarei Airport, on the other hand, is earmarked to service domestic tourism, business and commercial travellers' needs, providing direct flights to different destinations nationwide. NRC has identified that the Whangarei Airport, due to physical limitations, cannot expand any further than the recent runway extensions. Given this constraint, and noting advances in technology, enabling aircraft to carry more passengers and land on shorter runways, the report advocates that increasing the frequency of flights and destinations per day will be sufficient to service the district for the foreseeable future.

**Figure 1 - Transport Strategy - 2040**



Source: NRC Draft 30 year Transport Strategy, 2010



## **6 Evaluation / future direction**

Existing reports analysing and forecasting numbers in relation to the capacity and predicted growth of the Whangarei Airport, have presented a firm basis on which to assess the airport's ability to service the district for the next 30 to 50 years.

The Regional Draft 30 year Transport Strategy clearly sees no role for the Whangarei Airport as an international airport. Its role and function are envisaged to remain focused on the needs of domestic tourists, business and commercial travelers to and from the Whangarei District.

It seems likely that with increased demand over time, an increase in the frequency of flights will be necessary, possibly requiring the presence of another full-time operator in addition to Air New Zealand Link. Limitations of the current terminal have been highlighted, and the need to renovate this terminal or to construct new terminal facilities has been identified. There is sufficient scope on the existing airport site to accommodate these facilities.

It is considered that advances in aircraft technology will, in the future, produce airplanes that are quieter, offsetting potential increases in noise; and reducing the impact on local residents. The recent extension of the runway system ensures the ability of the airport to accommodate larger aircraft, while its proximity to the Whangarei CBD has been recognised as its main advantages.

These features, in addition to the airport's ability to cater for an increased frequency of flights and destinations, are considered to provide adequate capacity for the next 30 to 50 years.

## 7 References

Beca Planning. (1999a). Whangarei Airport Master Plan 1999 review. Auckland, New Zealand

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Northland Regional Council (2010). Draft 30 year Transport Strategy for Northland. Whangarei, New Zealand