

Queenstown Airport

Growth Projections

June 2009



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1 Introduction

Queenstown Airport Corporation Limited (QAC) appointed Airbiz in October 2003 to prepare a Master Plan for Queenstown Airport. The primary goal of the Master Plan was to provide the airport company with a framework that will allow orderly development of the airport for the next 20 years.

Three main outputs were identified at the commencement of the study, as follows:

- Traffic Growth Projections
- Terminal Area Development Plan
- Airport Master Plan

Since the development and finalisation of the Queenstown Airport Master Plan in 2003, further work has been conducted, including;

- Updating aircraft movement forecasts for noise contours, and
- Airport noise planning.

Section 2 describes the role of the Airport, its broad planning history and its geographical location.

Section 3 discusses the regulations; the Act's that govern the Airport; district issues; and airport noise management.

Section 4 discusses the basis of the forecasts that were prepared for both master planning purposes and noise contours purposes.

2 Existing Situation

Quick Summary

- In the year to 30 June 2008, Queenstown Airport handled 638,364 scheduled domestic and 62,276 international passengers, a total of 700,640, a 7% increase on 2007.
- In the same year, aircraft movements totalled approximately 50,000, an increase of 2.5% on 2007.
- Queenstown Airport has two runways:
 - Main runway 05/23
 - Crosswind runway 14/32
- The Airport caters to a mix of scheduled and non-scheduled services including a high proportion of helicopters servicing the large tourist and adventure market.
- Queenstown Airport is serviced by three direct international routes and four direct domestic routes including a variety of connecting services (see Figure 2.1).

2.1. Role of the Airport

Queenstown and the surrounding district is one of the most scenic areas in New Zealand, with spectacular lakes and mountain scenery. A wide range of outdoor activities is available, with snow skiing during the winter months becoming increasingly popular with both local and overseas skiers.

Queenstown Airport was established in 1935 and scheduled domestic air services commenced in the 1950's. Air New Zealand pioneered Trans-Tasman services for the 1995 winter ski season, using B737-200 aircraft. Due to the then limited runway length, which restricted the take-off weight of the aircraft, return Trans-Tasman services were via Christchurch in order to take on sufficient fuel.

The runway was extended in 1995 and 1998, allowing direct services from Queenstown to the major Trans-Tasman destinations (Brisbane, Sydney and Melbourne).

Today, the Airport accommodates Trans-Tasman services predominantly in the winter months, domestic trunk and regional services, sight-seeing flights and general aviation operations (fixed wing and helicopter).

The Airport currently operates in daylight hours only.

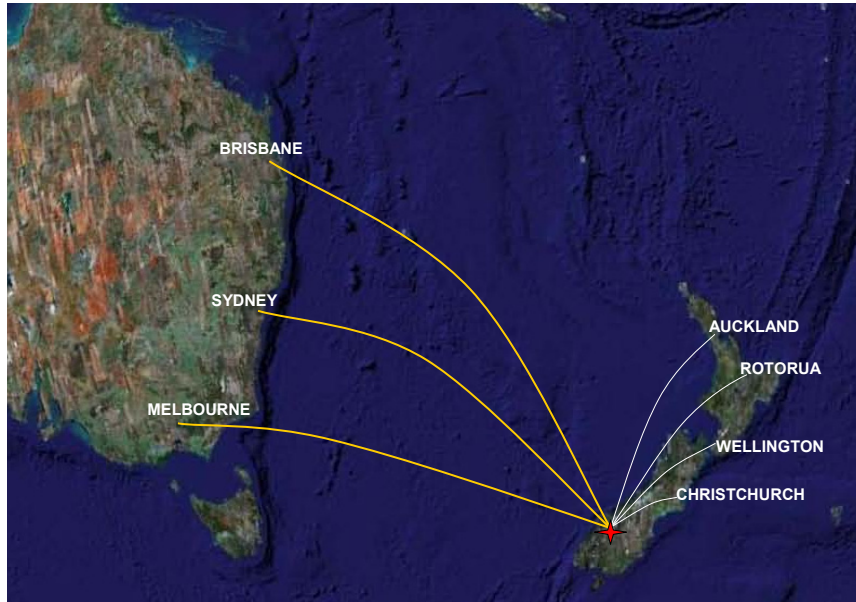


FIGURE 2-1 QUEENSTOWN DIRECT ROUTES

2.2. Planning History

The broad planning history of Queenstown Airport is outlined below:

- 1935 Queenstown Airport established
- 1991 Strategic Plan
 - Established business directions, including Trans-Tasman services

- 1993 Plan Change 96
 - Proposed zoning and designation changes for orderly expansion of the airport
 - Runway extension, crosswind runway relocation, terminal relocation proposed
 - Change refused, investigation of alternative sites initiated
- 1995 District Plan and Alternative Sites Study
 - Confirmed present site is the only practical site
 - Site now accepted and incorporated in the District Plan
 - Runway extended west and east, RESA implications understood,
 - 30m width retained based on Air New Zealand economic preference (extensions provided at 45m width).
- 2003-4 Master Plan
 - Master Plan for terminal and airport development to 2023.
- 2008 Updates
 - Forecasts prepared for noise contours
 - 2023 Master Plan updated

2.3. Airport Location

Queenstown Airport is located at Frankton, to the east of the Frankton Arm of Lake Wakatipu, approximately 7km by road from the centre of Queenstown. The airport is situated on the Frankton River terrace flats which are bordered by the Remarkables Mountains to the east, Lake Wakatipu and Peninsula Hill to the west, Queenstown Hill, Sugar Loaf and Ferry Hill to the north-west, Slope Hill to the north-east and the Crown Range to the north.

3 Regulatory Framework

3.1. Regulation

The regulatory framework that Queenstown Airport operates within is governed by three primary pieces of government legislation, those being;

- **Civil Aviation Act**
 - Queenstown Airport is governed by the requirements established under the New Zealand Civil Aviation Act 1990. This document sets out the rules and procedures associated with airport operations, facilities and safety.
- **The Airport Authorities Act**
 - The Airport Authorities Act (1966) establishes the legal parameters around the establishment and operation of an airport.
- **The Resource Management Act**
 - The Resource Management Act (RMA) is the governing document in regards to land uses on and around the Airport. The document provides rules for development on and around the Airport and sets out controls relating to airport effects both inside and outside the Airport's boundary.

3.2. District Issues

Local planning requirements are contained within the Queenstown and Lakes District Council (QLDC) Partially Operative District Plan (July 2007).

The QLDC recognises that Queenstown Airport is an important physical resource, crucial to the social and economic well being of the community and rate of growth in the District. Further, QLDC understands the necessity of protecting the Airport boundaries on its current site as a strategic outcome.

While QLDC notes that any adverse effects on the community arising from the operations at the Airport should be mitigated, the Council is of the view that the operation of Queenstown Airport should not preclude opportunities for further development of activities in close proximity, provided that appropriate controls are implemented.

Within the District Plan, there are policies for the Transport System which include objectives for air transport. Specifically the District Plan seeks to have *“effective and controlled airports for the District, which are able to be properly managed as a valuable community asset in the long term.”*

The District Plan policies aimed to achieve this objective are outlined at Section 14.1.3 of the Plan, as follows:

- To provide for appropriate growth and demand for air services for Queenstown.
- To avoid or mitigate any adverse environmental effects from airports on surrounding activities.
- To establish an Air Noise Boundary and Outer Control Boundary for Queenstown and Wanaka airports.
- To advocate a noise management regime at Queenstown airport to help manage the environmental effects of aircraft noise through means available to the Queenstown Airport Corporation but not available through the District Plan.
- To provide for appropriate recreational airport facilities at Wanaka.
- To ensure buildings at both airports have regard for and are sympathetic to the surrounding activities, and landscape and amenity values by way of external appearance of buildings and setback from neighbouring boundaries.
- To ensure noise monitoring regimes are established for the District's airports by the respective requiring authorities.
- To manage noise sensitive activities in areas with existing urban development surrounding the airport, while ensuring future noise sensitive activities in areas currently undeveloped and adjacent to airports are restricted.

3.3. Airport Operating Hours

The Airport currently operates in daylight hours only. However, the District Plan allows operations to occur between 6am and 10pm. These consented hours will govern times of operations in the future for both domestic and international flights.

3.4. Airport Noise Management

The current QLDC District Plan contains noise control boundaries based on noise levels. The aggregated noise from all aircraft operations at the Airport is not permitted to exceed the noise levels associated with the control boundaries. These boundaries and limits are illustrated in Figure 3.1.

Queenstown Airport has a Noise Management Plan which details procedures for the ongoing monitoring and management of aircraft noise as set out under NZS6805:1992 Airport Noise Management and Land Use Planning and the QLDC District Plan.

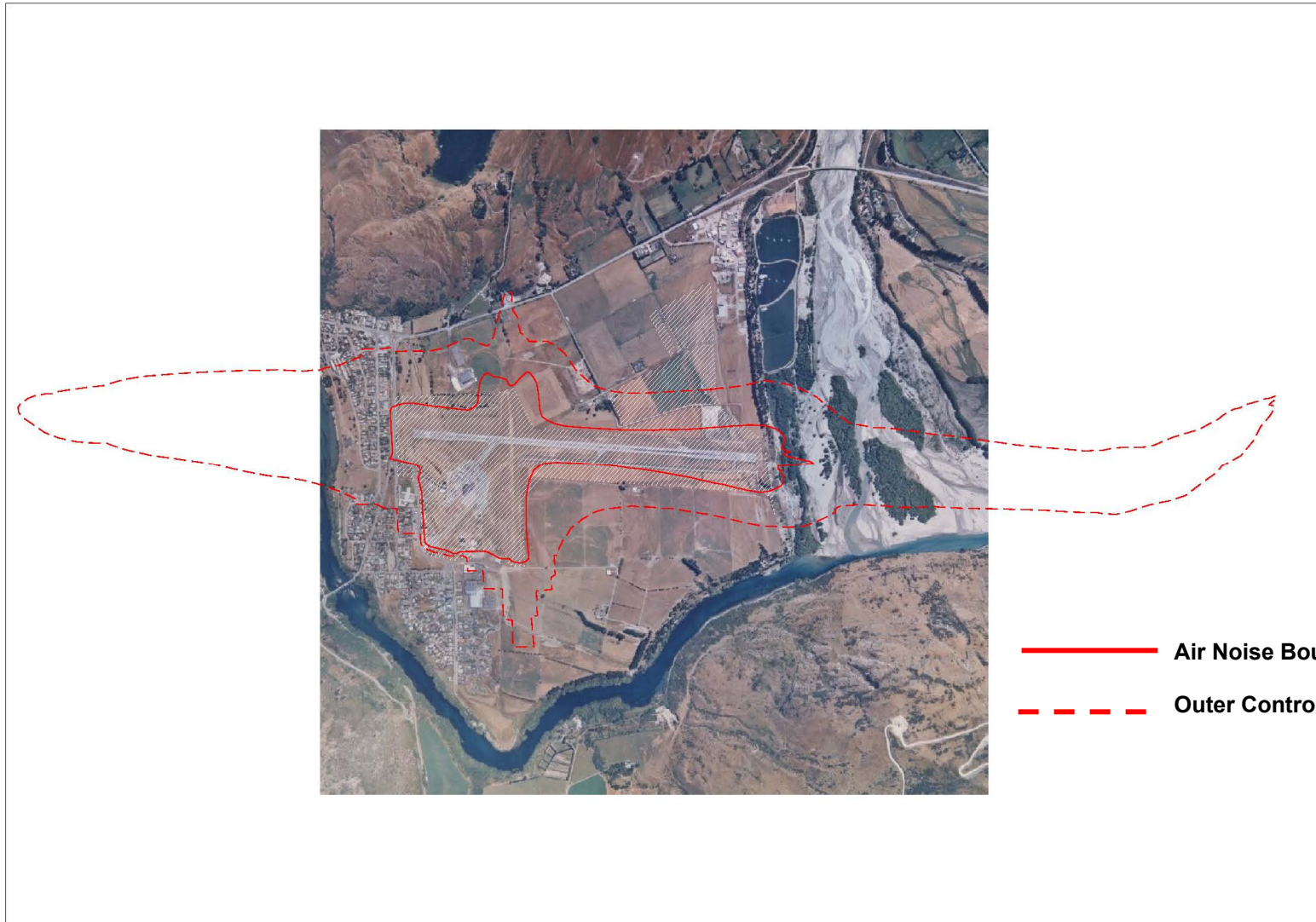


FIGURE 3-1 QLDC DISTRICT PLAN NOISE BOUNDARIES

4 Aviation Forecasts

Quick Summary

- By 2037 passenger movements are forecast to grow to approximately 2.6 million annual passengers. This includes passengers using international services, domestic services and general aviation services such as Helicopters and Flightseeing.
- Scheduled services currently account for approximately 82% of the overall passenger traffic with non-scheduled services comprising 18%.
- Aircraft moments are forecast to grow from 50,000 in 2008 to 70,000 by 2023 and 85,000 by 2037. This includes 21,000 scheduled international and domestic movements by 2037.

4.1. Existing Traffic

Queenstown Airport has two main categories of traffic, scheduled and non-scheduled services, comprising:

International	Air New Zealand	A320
	Qantas	B737-800
Domestic	Air New Zealand	B737-300, ATR 72, A320
	Qantas	B737-300/400

TABLE 4-1 SCHEDULED SERVICES

Flightseeing	BN-2A Islander, C172/177, C185, C206/207, Nomad, Caravan, Piper Saratoga
General Aviation	C172/177, C206
Helicopters	Squirrel AS350, AS355, Hughes 500, R22/R44, Eurocopter

TABLE 4-2 NON-SCHEDULED SERVICES

4.2. Key Growth Drivers

Key drivers of airport traffic growth at Queenstown Airport were identified to be:

- Regional tourism
- Industry, business
- Regional and national GDP
- World tourism
- Regional tourism marketing
- Local Council planning initiatives
- Airline marketing
- Airline competition
- Airline choices of fleet, aircraft size, schedule and frequency
- Currency competitiveness
- NZ viewed as “safe haven”
- Mode of transport choices – air versus surface
- Drivers are primarily regional and national

4.3. Historical Traffic and Growth Rates

Historical traffic and growth rates were analysed for passenger and aircraft movements at Queenstown, as well as at other New Zealand airports to determine trends over recent years.

Tables 4.3 and 4.4 depict the historical Queenstown Airport aircraft and passenger movement numbers upon which the aircraft and passenger demand forecasts were based.

In addition, other indicators of underlying demand were examined including GDP and population forecasts, international and domestic visitor arrivals, visitor trips and visitor night-stays, for New Zealand as a whole as well as for the Queenstown/Central Otago region and QLDC demographic analyses.

Aircraft Movements	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
International (scheduled)	98	116	176	184	188	254	312	370	440	476	550
Domestic (scheduled)	6,882	6,258	6,662	6,838	6,610	6,950	7,303	7,656	7,728	7,714	7,800
Flightseeing	13,128	13,404	14,282	12,112	13,220	12,766	12,745	12,724	12,282	9,758	9,682
GA – other ⁽¹⁾	8,554	11,865	10,014	11,396	10,975	10,870	9,168	7,466	7,320	12,644	12,458
Helicopters	6,741	10,888	11,056	11,618	10,715	11,230	13,628	16,026	17,150	18,562	19,898
Total	35,403	42,531	42,190	42,148	41,708	42,070	43,156	44,242	44,920	49,174	50,412
Annual Growth Rate %		20.1%	-0.8%	-0.1%	-1.0%	0.9%	2.6%	2.5%	1.5%	9.5%	2.5%

TABLE 4-3 HISTORICAL AIRCRAFT MOVEMENTS

Passenger Movements	1998	1999	2000	2001	2002	2003	2004	2005	2006⁽²⁾	2007⁽²⁾	2008⁽²⁾
International (scheduled)	6,125	8,169	16,144	15,661	15,402	21,330	22,716	24,399	43,852	53,547	62,276
Domestic (scheduled)	379,058	356,023	397,613	414,670	397,182	458,715	483,486	576,185	584,440	598,754	638,364
Flightseeing	59,732	60,988	64,983	55,110	60,151	58,085	61,816	65,881	n.a.	n.a.	n.a.
GA - other	16,679	23,137	19,528	22,222	21,401	21,197	21,515	21,838	n.a.	n.a.	n.a.
Helicopters	17,526	28,308	28,745	30,206	27,860	29,197	31,095	33,116	n.a.	n.a.	n.a.
Total	479,120	476,625	527,013	537,869	521,996	588,524	620,672	654,622	n.a.	n.a.	n.a.
Annual Growth Rate %		-0.5%	10.6%	2.1%	-3.0%	12.7%	5.5%	5.5%	4.3% ⁽³⁾	4.0% ⁽³⁾	7.3% ⁽³⁾

TABLE 4-4 HISTORICAL PASSENGER MOVEMENTS

Notes

- (1) Since 2007 more accurate reporting methods have been used to account for GA / Other aircraft movements
(2) Data for passengers on non-scheduled services has not been recorded accurately enough since 2006 for inclusion.
(3) Annual growth rates for 2006-08 are for scheduled passenger movements only

4.4. Aircraft Capacity Projections

Table 4.5 outlines the projections of increasing average aircraft seating capacities adopted to translate passenger movement forecasts into the aircraft movement forecasts.

Category	2006 ⁽¹⁾	2013	2023	2036	2037
International	126	150	155	158	159
Domestic	95	101	108	118	119
Flightseeing	8	12	15	20	21
GA Other	2	2	2	2	2
Helicopter	4	5	6	8	8

TABLE 4-5 AVERAGE AIRCRAFT SEATS

Note

Average aircraft seat capacities for 2006 have been estimated from actual passenger and aircraft movement data applying an estimated 80% load factor.

4.5. Forecast Growth Rates

With an appreciation of recent trends in these demand indicators and the forecasts for visitor activity, the adopted growth rates over the planning horizon are shown in Table 4.6 and Table 4.7.

Year	Scheduled		Non-Scheduled		
	International	Domestic	Flightseeing	GA/ Other	Helicopter
2004-13	6.5%	5.4%	6.5%	1.5%	6.5%
2014-25	5.5%	4.3%	5.5%	1.3%	5.5%
2026-37	4.5%	3.3%	4.5%	1.0%	4.5%

TABLE 4-6 ADOPTED PASSENGER MOVEMENT GROWTH RATES

Note: Passenger movement forecast growth rates are based on a 'Medium Scenario'

Category	2006 - 2011	2012 – 2013	2014 – 2016	2017 – 2023	2024 – 2025	2026 - 2037
International	3.1%	3.1%	2.9%	2.9%	3.2%	3.2%
Domestic	3.1%	3.1%	2.9%	2.9%	3.2%	3.2%
Flightseeing	1.1%	1.1%	1.9%	1.9%	1.9%	1.0%
General Aviation	1.1%	1.1%	1.9%	1.9%	1.9%	1.0%
Helicopters	5.5%	3.5%	3.5%	1.9%	1.9%	1.0%

TABLE 4-7 ADOPTED AIRCRAFT MOVEMENT GROWTH RATES

4.6. Traffic Projections

The forecast growth rates and projected trends in future aircraft seating capacity have been applied to current traffic levels to derive traffic projections for Queenstown Airport. These are depicted in the following Figures 4.1 through 4.6.

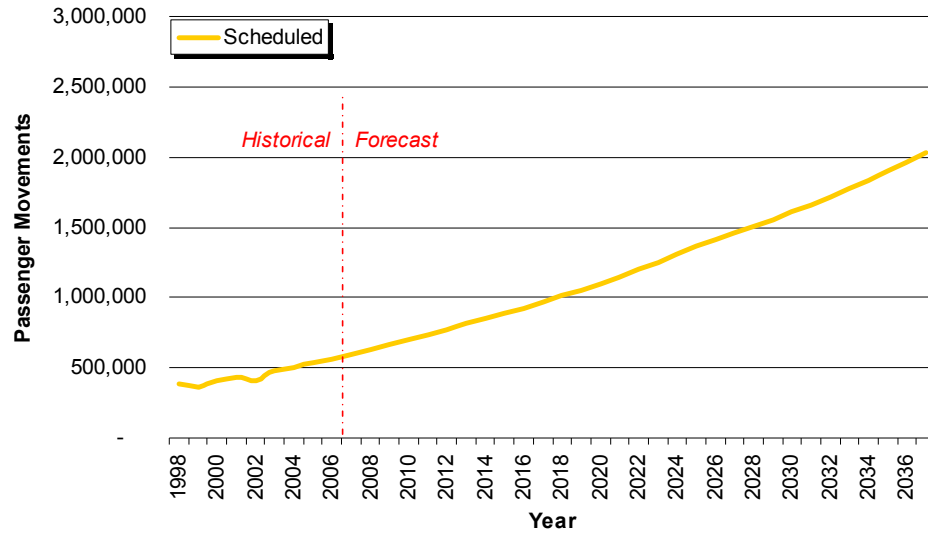


FIGURE 4-1 PASSENGER MOVEMENTS – SCHEDULED

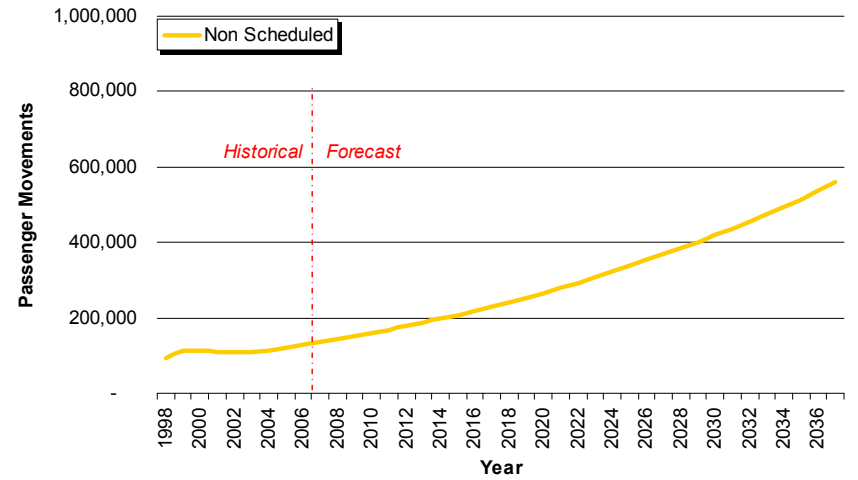


FIGURE 4-2 PASSENGER MOVEMENTS – NON- SCHEDULED

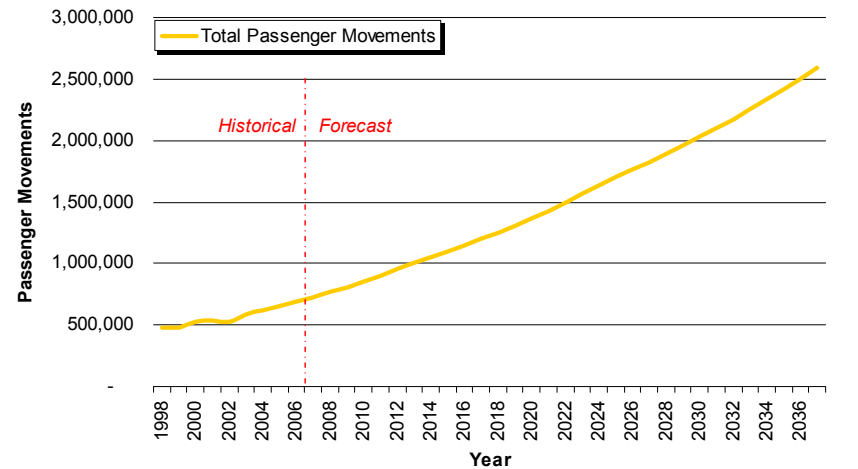


FIGURE 4-3 PASSENGER MOVEMENTS – TOTAL

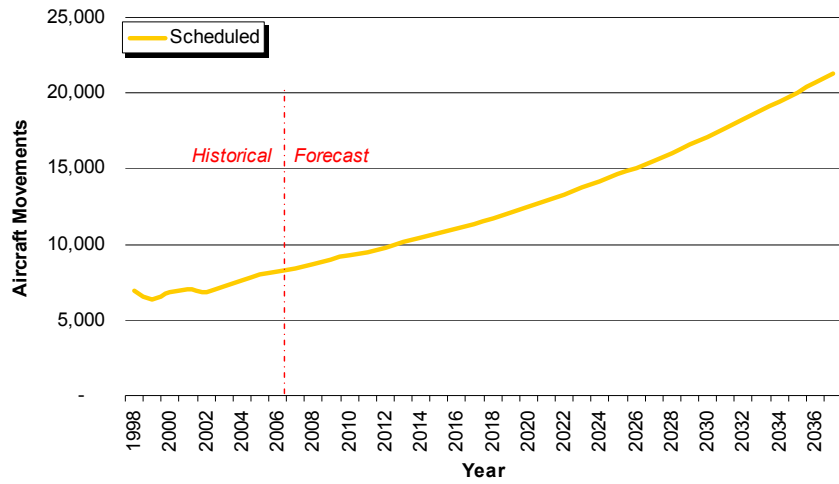


FIGURE 4-4 AIRCRAFT MOVEMENTS – SCHEDULED

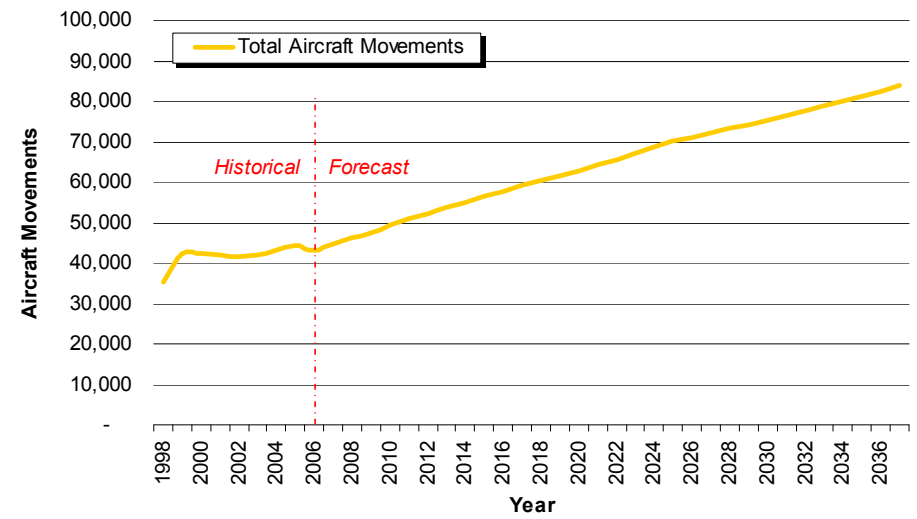


FIGURE 4-6 AIRCRAFT MOVEMENTS – TOTAL

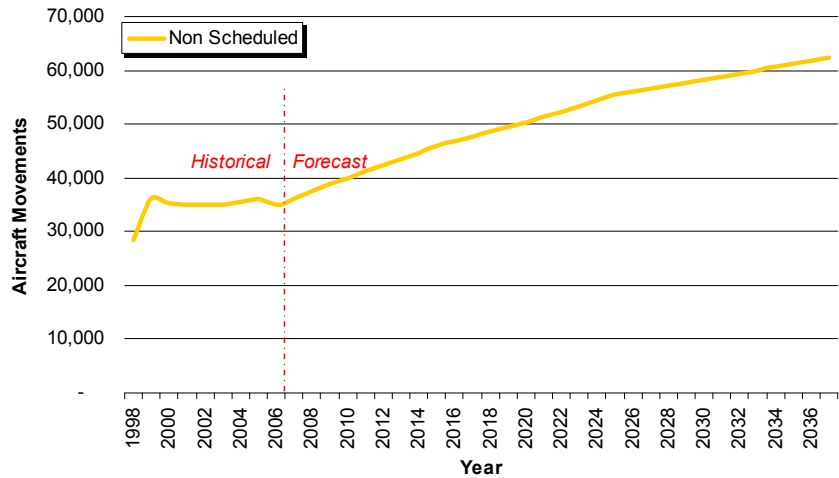


FIGURE 4-5 AIRCRAFT MOVEMENTS – NON- SCHEDULED