

Annexe 1 Airport Information Table

	Auckland International Airport	Whenuapai	Ardmore	Dairy Flat (North Shore Aerodrome)
Physical Information				
Airport Runway length (metres)	Main runway (05R-23L) - 3635 x 45m Main taxiway/runway (05L-23R) - 2910 x 45m (designated a non-precision runway)	Main runway 2031 x 45m (03/21) Additional runways 1. 1581 x 45m 2. 850 x 45m 3. 635 x 45m	Main runway 1411 x 45m (03/21) Additional runways 1. 597 x 18m 2. 518 x 18m	Main runway 811 x 60m (03/21) Additional runway 570x 60m (09/27) (Grassed area of runway is slightly longer than concrete/gravel centre strip)
Type of runway	Main runway Concrete PCN 65 ¹ Rigid pavement Medium strength No max tyre pressure limit Main taxiway/runway Concrete/bitumen PCN 65 Rigid pavement Medium strength No max tyre pressure limit Central 24m of runway surface is concrete, outer 11m of surface on each side is bitumen	Main runway Bitumen PCN 40 Rigid pavement Ultra-low strength No max tyre pressure limit Additional runways 1. Concrete PCN 36 Rigid pavement Ultra-low strength No max tyre pressure limit 2. Grass, firm ESWL ² 9080 3. Grass ESWL 1270	Main runway Bitumen PCN 14 Flexible pavement Ultra low strength Max allowable tyre pressure: 1500 kPa Additional runways 1. Grass ESWL 820 2. Grass ESWL 820	Main runway Concrete and Grass (concrete centre strip 9m wide flanked by grass). Grass soft when wet. ESWL 2500 Additional runway Gravel and grass (gravel centre strip 9m wide flanked by grass). Grass soft when wet. ESWL 1005
Physical size of airport (hectares)	1,497 hectares (3,700 acres)	311 hectares	262 hectares	<i>Information currently not available</i>
Fuel capacity and type	Avgas 100, Jet A1, AERO 100, AERO D100, Mobil Jet Oil	Jet A1. Small quantity of AVGAS.	Jet A1, Avgas 100	Jet A1, Avgas 100
Method of fuel delivery	On site storage	Tanker delivered with storage on site.	Direct from pump, or trucked from the facility to the aircraft. Carnet card.	On site storage
On site facilities/equipment	Rescue equipment: 1 x jet boat 2 x inflatable Zodiac-type dinghies 1 x hovercraft Capability for removal of disabled aircraft – for aircraft up to 140,000 kg equipment available locally (over 140,000 kit ex Sydney) Cargo handling facilities Repair facilities for visiting aircraft	Rescue Fire Facility providing up to Airfield Category 7. Customs and Immigration Maintenance Limited hangarage	Rescue Fire Shed contains: 3 x wall mounted 25kg dry powder/BCF extinguisher 1 x first aid kit 2 x stretchers 1 x wheelie bin of sand 6 x Day-Glo jackets Incident tape and standards 37 fire hydrants on mains supply	Basic parking and storage facilities.
Capability				
Current capability (approx flights p.a.)	145,000 annual aircraft movements 9.4 million passengers each year Average: <24,000 passengers per day 77 international flights per day 313 domestic flights per day Airport operational 24 hours a day	Currently about 18,000 movements per annum.	Currently 230,000 aircraft movements per year.	In the order of thousands per year. Great Barrier Airlines operates out of the airport and currently has 6 flights per day to the Barrier.




Max plane size	Large cargo planes like the Antonov An 124	B757, B767 up to 111.4 KG, DC10 up to 174 KG, MD-11 up to 150 KG. (KG's are x 1000). Note: ground manoeuvring is tight for wide body jets at Whenuapai and limited parking for large aircraft restricts operations.	Fokker Friendship F28, C130 Hercules, P-3K Orion.	Britten Norman Trislander (currently operated by Great Barrier Airlines)
Projected capacity after increase	400,000 aircraft movements per year 30 million passengers per year	Possible plans to increase airport would result in up to approximately 100,000 aircraft movements a year.	No plans to increase capacity of airport.	No currently plans to increase capacity of airport.
Accommodation of additional flights for emergency relief operations	Yes	Yes, however limited apron and parking space restrict the airfields, capacity.	Yes, military planes, helicopters etc.	Yes but only smaller aircraft
Alternative airport	Hamilton (airplanes up to and including 767) Christchurch and Ohakea (aircraft larger than 767)	Auckland International Airport RNZAF Ohakea	Auckland International Airport Hamilton Airport	Auckland International Airport
Ability to accommodate fully laden large military transport aircraft	Yes	Yes, currently supports C130 Hercules. Can support up to C-5 Galaxy but with limited Take off weights.	Yes, C130 Hercules, Orion	No
Commercial night flying	Yes	In emergency only. Whenuapai is a military airfield and there are currently no commercial operations.	Yes but Ardmore is privately owned and operated and does not support 24 hr Tower facilities.	Supports some night flying. Has lights on the runway.
Airport Notes	Auckland International Airport is located 9.5NM S of Auckland. Operator: Auckland International Airport Limited PO Box 73020 Auckland Airport Ph: 275 0789 Fax: 275 5835	Whenuapai is a non-certified military aerodrome 7NM NW of Auckland City. Operator: Royal New Zealand Air Force RNZAF Base Auckland Private Bag Whenuapai Ph: 417 7440 Fax: 417 7445	Ardmore is a non-certified aerodrome 3NM SE of Manurewa. Operator: Ardmore Airport Ltd Private Bag 4 Papakura Ph: 298 9544 Fax: 298 6213	Dairy Flat is a non-certified aerodrome 2NM SSW of Silverdale. Operator: North Shore Aero Club (Inc) Postman Road RD4, Albany Ph: (09) 426 4273 Fax: (09) 426 5912
Hazards				
Tsunami	At risk, both from distantly generated tsunami and locally generated tsunami (impact will be determined by wave height as anything below 4m is unlikely to impact the airport).	Low Risk. Whenuapai is located about 20 metres above sea level and has a low risk of being impacted by a tsunami.	No Risk. Ardmore airport is located inland and elevated (approx 33m) so is extremely unlikely to be impacted by a tsunami.	No Risk. Dairy Flat is located inland and elevated (approx 64m) so will not be impacted by tsunami.
Earthquake	At risk, the airport is built on poorly consolidated sediments that are prone to liquefaction. This may result in damage to runways and structures in the event of a significant earthquake. Damage could include spalling at pavement joints and settlement of runway pavement. Part of the runways may still be useable however. The liquefaction susceptibility of the soils underlying AIAL is 30-90%.	At risk, however Whenuapai is likely to be the least vulnerable of Auckland's airports to an earthquake (AELG report). Built mostly overlying soils unlikely to liquefy in the Lifelines scenario earthquake.	At risk, located in close proximity to the Wairoa North Fault which has been active in the last 0.5 million years and possibly more recently. Built upon Holocene age saturated fine sediments which have the potential for greater ground shaking.	At risk. Airport built overlying firmer soils and unlikely to liquefy in Lifelines scenario earthquake.
Volcanic Eruption	At risk, both from a local eruption of the Auckland Volcanic Field and a distant eruption from the Taupo Volcanic Zone. Impact could range from closure of airport due to ash fall to damage to the airport from a close by eruption from the Auckland Volcanic Field. Note: wind direction in Auckland is predominantly west – northwest.	At risk, both from a local eruption of the Auckland Volcanic Field and a distant eruption from the Taupo Volcanic Zone. The airport could be closed due to ash fall from a local or distant eruption. The airport is outside the known boundaries of the Auckland Volcanic Field so is unlikely to be physically impacted by a close by eruption of the field. Note:	At risk, both from a local eruption of the Auckland Volcanic Field and a distant eruption from the Taupo Volcanic Zone. The airport could be closed due to ash fall from a local or distant eruption. The airport is outside the known boundaries of the Auckland Volcanic Field so is unlikely to be physically impacted by an eruption of the field. Note: wind	At risk, both from a local eruption of the Auckland Volcanic Field and a distant eruption from the Taupo Volcanic Zone. The airport could be closed due to ash fall from a local or distant eruption. The airport is outside the known boundaries of the Auckland Volcanic Field so will not be directly impacted by an eruption of the field. Note: wind direction in

		wind direction in Auckland is predominantly west – northwest.	direction in Auckland is predominantly west – northwest.	Auckland is predominantly west – northwest.
Flooding/Storm surge	At risk from storm surge especially when storm surge coincides with higher than normal tides. May result in flooding of perimeter of airport.	Low risk of being flooded from a rising stream or river. May still be susceptible to surface flooding and localised flooding.	Possible flooding risk due to swampy nature of area and location of streams and rivers. Inland so unaffected by storm surge.	May experience localised flooding due to nearby streams. Elevated so will not be affected by storm surge.
Loss of infrastructure (power/water etc)	Standby power available.	Standby power available.	No standby power supply	No standby power supply
Other hazards	Birds in vicinity regularly.	Birds throughout the year and fog in winter. Local sodium street lighting can be confused with runway lights.	Fog in autumn and winter months. Severe frosts and icing can occur during winter. Strong winds from any direction across the valley will often produce significant turbulence off the surrounding hills. Birds in vicinity regularly.	Power lines and trees 300m to northeast of aerodrome. Turbulence and wind shear in west/northwest wind conditions. Birds in vicinity regularly.

Aircraft

Aircraft	Number of passengers	Max takeoff weight	Fuel capacity (and fuel weight)	Cargo capacity	Where they can land in Auckland	Comments/picture
Boeing 747-400 Air New Zealand	12 First class 56 Business class 324 Economy class Total: 392	394 tonnes ³	216,319 litres ⁴ Fuel weight: 173 tonnes	20 tonnes	Auckland International Airport	
Boeing 767-300 Air New Zealand	24 Business class 210 Economy class Total: 234	185 tonnes	91,400 litres Fuel weight: 72 tonnes	11 tonnes	Auckland International Airport Whenuapai (with reduced Take Off Weight)	
Boeing 767-200 Air New Zealand	24 Business class 176 Economy class Total: 200	163 tonnes	76,800 litres Fuel weight: 61 tonnes	10 tonnes	Auckland International Airport Whenuapai (with reduced Take Off Weight)	
Airbus A320 Air New Zealand	8 Business class 138 Economy class Total: 146	77 tonnes	23,860 litres Fuel weight: 18.85 tonnes	2,500 kg	Auckland International Airport Whenuapai	
Boeing 737-300 Air New Zealand Qantas	12 Business class 102 Economy class Total: 114 Or: 136 Economy class (Domestic flights)	63.3 tonnes	20,100 litres Fuel weight: 15.88 tonnes	2,500 kg	Auckland International Airport Whenuapai	
ATR72-500 Air New Zealand	66 Economy class	22,500 kg	6,370 litres Fuel weight: 5000 kg	1,672 kg	Auckland International Airport Whenuapai	

SAAB 340A Air New Zealand	33 Economy class	12,250 kg	3,280 litres Fuel weight: 2,600 kg	950 kg	Auckland International Airport Whenuapai	
Beech 1900D Air New Zealand	19 Economy class	7,765 kg	2,516 litres Fuel weight: 2,035 kg	647 kg	Auckland International Airport Whenuapai Ardmore	
P-3K Orion RNZAF	Normal operations 20 passengers including crew of 11.	54,950 kg	27,300 kg	Nil	Whenuapai Auckland International Airport Ardmore	
C-130H Hercules RNZAF	92 passengers (plus a crew of 5)	70,307 kg	28,540 kg	20,412 kg	Whenuapai Auckland International Airport Ardmore	
UH-1H Iroquois RNZAF	9 passengers (plus a crew of 3)	4,300 kg		Max under slung load: 1,045 kg	Whenuapai Auckland International Airport Ardmore Airport Dairy Flat (North Shore Aerodrome)	Equipment: Rescue winch 270 kg max load, Cable length 76 m Nightsun search light Night vision goggle capacity 
Sh-2G Super Sea Sprite RNZ Navy	2 crew 5 passengers	6,123 kg		Max under slung load: 1,800 kg	Auckland International Airport Whenuapai Ardmore Airport Dairy Flat (North Shore Aerodrome)	

Beech King Air B200 RNZAF		5,670 kg		2,010 kg	Whenuapai Auckland International Airport Ardmore	
B47G-3B-2 Sioux RNZAF	Two passengers (including pilot)	1,338 kg		Nil	Whenuapai Auckland International Airport Ardmore Airport Dairy Flat (North Shore Aerodrome)	
Boeing 757-200 RNZAF	170 passengers in two classes and 6 crew	115,680 kg. Limited to approx 108,000 kg Take off weight from Whenuapai	43,490 litres	32,755 kg	Whenuapai Auckland International Airport	
Lockheed C5A Galaxy	73 passengers and 6 crew	379,657 kg	194,370 litres Fuel weight: 145,125 kg	130,950 kg	Whenuapai Auckland International Airport	Reduced Take Off weight out of Whenuapai
Lockheed C-141 Starlifter	200 troops and five crew	155,585 kg		31,239 kg	Whenuapai Auckland International Airport	Reduced Take Off weight out of Whenuapai.
Antonov An 124	15 passengers and 6 crew	392,000 kg		120,000 kg	Auckland International Airport	Runway required for landing: 3,000 m Reduced Take Off weight may be required for AIAL

Notes

1. Pavement Classification Number. PCNs are expressed on a scale from approximately 5 (weakest pavements) to 110 (strongest pavements) and are linked to the pavement type and a standard subgrade category. Aircraft tire pressure restrictions, where applicable, are contained within the PCN reporting code. The system is the internationally approved and accepted method for the reporting of airport pavement bearing strengths.
2. Equivalent Single Wheel Load classification system for the surface bearing strength of unpaved manoeuvring areas. Since undercarriage loads in excess of ESWL value could damage the surface, aircraft weights must be limited to ensure that the ESWL for the aircraft does not exceed that specified for the runway.
3. The maximum Take Off Weight for the planes is listed, as this was the easiest statistic to source from the Internet. The maximum landing weight would be less due to consumed fuel.
4. Because of the variation in types and configurations of the above planes the numbers given are approximates.

Resources

The above information was sourced from the following sites, organisations or individuals:

Airfield Information:

www.auckland-airport.co.nz

www.homepages.ihug.co.nz/~airdata/AKL-map.htm

www.homepages.ihug.co.nz/~airdata/auckland_airport.htm

www.homepages.ihug.co.nz/~airdata/ardmore.htm

www.ardair.co.nz

www.aip.net.nz

www.homepages.ihug.co.nz/~airdata/Whenuapai.htm

www.tc.gc.ca/CivilAviation/RegServ/terminology/glossary/p.htm

Auckland Auckland International Airport Operations

Ardmore Ardmore Airport Limited, Operations Manager

Ray Johnston, Papakura Civil Defence

Whenuapai RNZAF Base Auckland

Dairy Flat North Shore Aero Club

Hazards Information:

Auckland Engineering Lifelines Project: Stage One Report, ARC Publication, July 1997

Auckland Engineering Lifelines Project: Final Report – Stage 1, ARC Technical Publication No 112, November 1999

Auckland Region Civil Defence Emergency Management Group Draft Plan, March 2004

Earthquake Hazards in the Auckland Region, ARC Technical Publication No 57, April 1995

Aircraft Information:

Air New Zealand www.airnewzealand.co.nz

RNZAF www.airforce.mil.nz

Lockheed www.military.cz/usa/air/in_service/aircraft/c5a/c5a_en.htm
www.military.cz/usa/air/in_service/aircraft/c141/c141_en.htm

Antonov An124 www.emairport.co.uk/profiles/specsheets/an124.htm
www.alfaaerospace.com.au/page22.html
www.home.t-online.de/home/acl-frankfurt/an124.htm

Super Sea Sprite Fred Wilson, Auckland City Council