



# Wellington Airport Noise Management Plan

Updated: 15 February 2018



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PART A

# Noise Management Plan

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# 1. Introduction

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WCC District Plan Policy 10.2.5.4 requires that a Noise Management Plan is developed and implemented by Wellington International Airport Limited to assist all interested parties in complying with the objectives and rules in the District Plan.

The noise management plan will include:

- a statement of noise management objectives and policies
- details of methods and processes for remedying and mitigating adverse effects of airport noise including but not limited to:
  - improvements to Airport layout to reduce ground noise
  - improvements to Airport equipment (including provision of engine test shielding such as an acoustic enclosure for propeller driven aircraft) to reduce ground noise
  - aircraft operating procedures in the air and on the ground
- procedures for monitoring and ongoing review of the plan
- dispute resolution procedures
- a programme for immediate and ongoing refinement by way of shrinkage of the location of the Air Noise Boundary (ANB), with priority to be given to those areas which through further monitoring are found not to be exposed to forecast Ldn 65 dBA, with the intent that the programme be completed within two years
- consideration of land use measures which may mitigate adverse effects through changes to controls
- consideration of any need for insulation of existing houses within the ANB; the extent to which such insulation is appropriate, and the ultimate responsibility for cost
- details of methods and process for monitoring and reporting compliance with the District Plan rules, including but not limited to:
  - airnoise boundary and activity ceilings provided in the rules
  - engine testing
  - Auxiliary Power Units (APUs) Ground Power Units (GPUs)
  - curfew
- details for certification by WIAL of night curfew exempt aircraft.

## 2. Objectives and policies

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### Noise monitoring system

<b>Objective/policy</b>	To have a system of monitoring noise levels at and around the air-noise boundary which reliably and consistently <ul style="list-style-type: none"><li>• identifies source of the noise</li><li>• measures the noise level in accordance with NZS6805:1992</li><li>• times duration of noise</li><li>• provides a cumulative record of noise events/levels</li></ul> so that reliable and consistent data is available to all affected parties.
<b>QA and management procedure</b>	Develop and implement procedures which ensure that data from the noise monitoring terminals is collected, checked, analysed and reported to the committee.
<b>Reporting</b>	Identify frequency and form of presenting data collected by the noise monitoring system to the committee.
<b>Consultation</b>	Ongoing via committee - issues to be identified.

### Air-noise boundary compliance

<b>Objective/policy</b>	Develop and implement method for monitoring compliance with air-noise boundary rules.
<b>Rules</b>	District plan
<b>Reporting/enforcement</b>	Develop and implement methods of ensuring compliance, including <ul style="list-style-type: none"><li>• procedures to warn airlines of potential non-compliance</li><li>• reporting of enforcement authority decisions to committee.</li></ul>
<b>Complaints</b>	See <b>Complaint handling</b> section
<b>Consultation</b>	Methods developed in consultation with affected parties via committee.

### Curfew

<b>Objective/policy</b>	<ul style="list-style-type: none"><li>• To minimise disturbance to residents at night by means of a curfew</li><li>• To promote education of airport users in curfew rules</li><li>• To manage applications for exemptions from curfew</li></ul>
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<b>Rules</b>	District plan
<b>Procedures (local)</b>	Develop and implement procedures <ul style="list-style-type: none"> <li>• to ensure correct advice is given to operators - in conjunction with Air Traffic Control and airport users</li> <li>• to deal with breaches of curfew rules</li> <li>• to deal with residents' complaints (see <b>Complaint handling</b> section).</li> </ul>
<b>Reporting/enforcement</b>	Develop and implement procedures for reporting breaches, complaints (see <b>Complaint handling</b> section) and enforcement decisions/outcomes to committee
<b>Consultation</b>	Procedures developed in consultation with affected parties via committee

## Engine testing

<b>Objective/policy</b>	To minimise and mitigate effects of noise from engine testing.
<b>Rules</b>	District plan
<b>Procedures (local)</b>	Develop and implement <ul style="list-style-type: none"> <li>• procedures and guidelines to educate and assist airport users to comply with rules</li> <li>• procedures for operators to report engine tests.</li> </ul>
<b>Capital works</b>	Investigate options (shielding/enclosure) to mitigate effects of scheduled maintenance run-ups.
<b>Reporting/enforcement</b>	<ul style="list-style-type: none"> <li>• Develop and implement reporting procedures for operators to report engine tests</li> <li>• Develop and implement procedures for reporting breaches, complaints (see <b>Complaint handling</b> section) and enforcement decisions/outcomes to committee.</li> </ul>
<b>Consultation</b>	Procedures developed in consultation with affected parties via committee.

## Ground power (APU/GPU)

<b>Objective/policy</b>	To minimise and mitigate effects of noise from APUs and GPUs
<b>Rules</b>	District plan

<b>Procedures (local)</b>	Develop <ul style="list-style-type: none"> <li>• ground handling procedures consistent with the rules</li> <li>• reporting procedures for operators</li> </ul>
<b>Capital works</b>	Continue implementation of ground power reticulation
<b>Reporting/enforcement</b>	Develop and implement procedures for reporting breaches, complaints (see <b>Complaint handling</b> section) and enforcement decisions/outcomes to committee
<b>Consultation</b>	Procedures developed in consultation with affected parties via committee

## Airside maintenance

<b>Objective/policy</b>	To minimise the amount of work carried out at night and mitigate the effects on residents of noise from work which can only be done at night
<b>Rules</b>	District plan
<b>Situations where night-time work is appropriate</b>	WIAL to consult on criteria which must be fulfilled to justify work performed at night
<b>Procedures/methods of work</b>	Develop and implement procedures and work methods to reduce disturbance to residents.
<b>Reporting/enforcement</b>	Develop and implement procedures for recording, monitoring and enforcement, including reporting at all stages to committee.
<b>Complaints</b>	See <b>Complaint handling</b> section
<b>Consultation</b>	Procedures to be developed in consultation via committee.

## Complaint handling

<b>Objective/policy</b>	To receive, identify, respond to and record all complaints about airport noise
<b>Procedure</b>	Develop and implement procedures to <ul style="list-style-type: none"> <li>• centralise complaint recording/receipt point</li> <li>• identify source/respond to complainant/follow up if appropriate</li> <li>• report to committee</li> <li>• analyse trends and correlations between complaints and noise events</li> </ul>
<b>Education</b>	Promote community awareness of complaint/contact point



**Consultation** Procedures and methods to be developed in consultation via committee

## Operating procedures/flight tracks

**Objective/policy** Promote best practices for mitigating noise effects during takeoff and arrival of aircraft, including

- use of preferential runway
- future development of approach and departure tracks/ performance criteria
- adherence to flight paths

consistent with the safe, orderly and expeditious flow of aircraft traffic

**Rules (CAA/ACNZ)**

- CAR part 93
- ICAO Annex 16, Annex 11 and Doc 444

**Reporting/enforcement** Develop and implement procedures for recording, monitoring and enforcement

**Consultation** Best practices and procedures developed in consultation with airlines and ACNZ via committee

## Education

**Policy/objective** To improve awareness of affected parties of Wellington airport noise rules, current issues and noise management, and to advocate the use of quieter aircraft

**Noise management plan** Identify organisations/companies/ people who would benefit from education about the NMP, formulate education ideas and plans and promote their adoption by interested parties.

**Consultation** Committee to identify organisations/companies/people who would benefit from education about the noise management plan, and consult with them regarding education initiatives

### 3. Definitions

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<b>Alternate</b>	Aircraft using the airport as planned alternative to landing at a scheduled airport.  Note any aircraft landing at Wellington as an alternate during curfew hours cannot depart until 0600 hrs.
<b>Arrival</b>	Touchdown on landing
<b>Departure</b>	Start of take-off roll
<b>Director</b>	The Director of Civil Aviation Authority
<b>Disrupted flight</b>	<p>A flight which is delayed on arrival or departure at Wellington through unforeseen circumstances that could not reasonably be catered for by prudent timetabling, such delay having originated at Wellington or within the previous 4 sectors, as a result of:</p> <ul style="list-style-type: none"><li>• weather (at origin, en-route, or destination causing cancellations, diversions, delays, missed approaches or holding); or</li><li>• Air Traffic Control (congestion, start delays, en-route holding or approach delays); or</li><li>• closure of a departure or destination aerodrome; or</li><li>• diversion for in-flight medical condition or flight safety reason to another aerodrome other than the flight planned aerodrome; or</li><li>• aircraft unserviceability (e.g. mechanical breakdown); or</li><li>• the aircraft being required to wait for crew from a flight delayed as a result of any of the above.</li></ul> <p>Note:</p> <ul style="list-style-type: none"><li>• An aircraft which has been substituted for an aircraft delayed as a result of any of the above also comes within the definition of disrupted flight</li><li>• An aircraft may not depart Wellington Airport after midnight and before 0600hrs to act as a substitute aircraft for another that has become unserviceable at a location other than Wellington</li></ul>
<b>Emergency</b>	<ol style="list-style-type: none"><li>1. Aircraft landing in an emergency</li><li>2. The operation of emergency flights required to rescue persons from life-threatening situation or to transport patients, human vital organs or medical personnel in a medical emergency</li><li>3. The operation of unscheduled flights to meet the needs of a national civil defence emergency declared under the Civil Defence Emergency Management Act 2002</li></ol>

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## PART A Noise Management Plan

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- Statutory holiday period**
- (i) The period from 25 December to January 2, inclusive. Where December 25 falls on either a Sunday or a Monday, the period includes the entire or previous weekend. Where New Year's Day falls on a weekend, the period includes the two subsequent working days. Where January 2 falls on a Friday, the period includes the following weekend.
  - (ii) The Saturday, Sunday and Monday of Wellington Anniversary weekend, Queen's Birthday weekend and Labour weekend.
  - (iii) Good Friday to Easter Monday inclusive.
  - (iv) Waitangi Day
  - (v) Anzac Day
  - (vi) Where Waitangi Day or Anzac Day falls on a Friday or a Monday, the adjacent weekend is included in the period
  - (vii) The hours from midnight to 0600hrs immediately following the expiry of each statutory holiday period defined in (i) to (vi) above.
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# Noise terminology

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<b>Noise</b>	A sound that is unwanted by, or distracting to, the receiver.
<b>dB</b>	<u>Decibel</u> The unit of sound level. Expressed as a logarithmic ratio of sound pressure P relative to a reference pressure of $P_r=20 \mu\text{Pa}$ i.e. $\text{dB} = 20 \times \log(P/P_r)$
<b>A-weighting</b>	The process by which noise levels are corrected to account for the non-linear frequency response of the human ear.
<b>dB(A)</b>	The unit of sound level which has its frequency characteristics modified by a filter (A-weighted) so as to more closely approximate the frequency bias of the human ear.
<b><math>L_{Aeq}(t)</math></b>	The equivalent continuous (time-averaged) A-weighted sound level. This is commonly referred to as the average noise level. The suffix "t" represents the time period to which the noise level relates, e.g. (8 h) would represent a period of 8 hours, (15 min) would represent a period of 15 minutes and (2200-0700) would represent a measurement time between 10 pm and 7 am
<b><math>L_{Amax}</math></b>	The A-weighted maximum noise level. The highest noise level which occurs during the measurement period
<b><math>L_{dn}</math></b>	The day-night sound level which is calculated from the 24 hour $L_{Aeq}$ with a 10dB penalty applied to the night-time (2200-0700 hours) $L_{Aeq}$ .
<b><math>L_{den}</math></b>	The day evening night noise level which is calculated from the 24 hour $L_{Aeq}$ with a 5 decibel penalty applied to the evening (1800-2200 hours) $L_{Aeq}$ and a 10 decibel penalty applied to the night-time (2200-0700 hours) $L_{Aeq}$ .
<b>SEL or <math>L_{AE}</math></b>	<u>Sound Exposure Level</u> The sound level of one second duration which has the same amount of energy as the actual noise event measured.  Usually used to measure the sound energy of a particular event, such as a train passby or an aircraft flyover

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# 4. Implementation Programme (Revised as at April 2007)

	Calendar year														
	2007			2008			2009			2010			2011		
<b>Element of decision - outside WIAL boundaries</b>															
(a) <b>Refinement of ANB position</b>															
• confirmation of scope															
• confirmation of contribution															
• measurement programme															
• decision on district plan															
(b) <b>Consideration of any need for insulation of existing house within the ANB</b>															
• LUMINS Stage I															
• LUMINS Stage II															
(c) <b>Review of land use controls</b>															
• LUMINS Stage I															
• LUMINS Stage II & Overall conclusion															
• monitoring															
(d) <b>Change to district plan land use controls if appropriate</b>															

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(c) <b>Dispute resolution process defined</b>	COMPLETE
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## PART B

# Rules and Regulations

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