

An aerial photograph of Wellington Airport, New Zealand, showing the terminal, runways, taxiways, and surrounding urban and green areas. A yellow banner with the text 'WELLINGTON AIRPORT' is overlaid in the top right corner.

**WELLINGTON
AIRPORT**

**AIRPORT NOISE MANAGEMENT PLAN
2022/23 REVIEW**

DRAFT FOR CONSULTATION

Table of Contents

1.	Introduction	4
1.1	Objective of the Airport Noise Management Plan	4
1.1	List of Acronyms	5
1.2	List of Definitions	5
2.	Statutory Context	8
2.1	International	8
2.2	National	8
2.3	Local	8
3.	Sources of Airport Noise	10
3.1	Aircraft Operations	10
3.2	Auxiliary Power Units	10
3.2	Ground Service Equipment	10
3.2	Engine Testing	11
3.2	Construction and Maintenance of Airfield & Night Works	11
3.3	Wildlife Management	11
3.4	Airport Fire Station	12
4.	Noise Limits at Wellington Airport	13
4.1	Aircraft Operations	13
4.2	Engine Testing	13
4.3	Operating Ground Power and Auxiliary Power Units (GPUs/APUs)	14
4.3	Land Based Noise	14
5.	Noise Management	16
5.1	Managing Airport Noise	16
5.2	Noise Abatement Procedures	17
5.3	Exclusion of "Noisy" Aircraft	17
5.4	Wellington Airport Curfew	17
5.5	Engine Testing	18
5.6	Ground Power and Auxiliary Power Units	18
5.8	Stakeholder Communications Plan	20
5.9	Airport Noise Management Committee (ANMC)	21
5.10	Quieter Homes Programme	21
5.11	Construction Noise Management Plan	23
5.12	Military Aircraft Operations	23
6.	Noise Monitoring Programme	24
6.1	Measuring Aircraft Noise	24
6.2	Airport Noise and Operations Monitoring System	24
6.3	Monitoring locations	25
6.4	Noise Level Exceedances	26
7.	Complaints	28
7.1	Complaint Handling	28

7.2	Lodging a Complaint	28
7.3	Investigations	28
7.4	Non-Compliances	29
7.5	Analysis and Reporting	29
8.	Noise Management Website	30
9.1	Airport Noise Management Plan	30
9.2	Aircraft Operations	30
9.3	Airport Noise Monitoring	30
9.	Review	31
Appendix A Air Noise Boundary		32
Appendix B Engine Testing Locations		33
Appendix C East Side Area Compliance Limit		34
Appendix D Airport Noise Management Committee Terms of Reference and Dispute Resolution Procedures		35
Appendix E Airport Wide Construction Management Plan		41

List of Figures

Figure 1:	Electric GPU Stands at Wellington Airport	20
Figure 2:	Quieter Homes Rollout Map, November 2021.	22
Figure 3:	Air Noise Monitoring Terminal Locations.	26
Figure 4:	East Side Area Compliance Line.	34
Figure 5:	Air Noise Monitoring Terminal Locations.	36

List of Tables

Table 1:	Exceptions to Condition 29.	14
Table 2:	GPU and APU noise limits.	14
Table 3:	Noise limits for land based noise within the Miramar South Area.	15
Table 4:	Noise limits for land based noise within the Main Site Designation.	15
Table 5:	Noise limits for land based noise within the East Side Designation.	15

List of Appendices

Appendix A Air Noise Boundary	32
Appendix B Engine Testing Areas	33
Appendix C East Side Area Compliance Limit	Error! Bookmark not defined.
Appendix D Airport Noise Management Committee terms of Reference	34
Appendix E Site Wide Construction Management Plan	35

1. Introduction

Wellington International Airport Limited's (WIAL) approach to noise management at Wellington International Airport (**Wellington Airport or Airport**) is guided by our noise management plan.

By their very nature, all airports generate noise and Wellington Airport is no exception. Much of this noise is unavoidable and is essential to allow the airport to function, connecting Wellington both economically and socially. The main sources of noise at the Airport are described in section 3.

However, we are very mindful of the effects of airport noise on the local community. Over the last 20 years the overall noise generated has significantly declined, even as activity has increased, thanks to substantial investment in new technologies by both the WIAL and airlines.

WIAL is dedicated to careful management and monitoring of airport noise to minimise these impacts as much as possible and practicable.

To this end, this Airport Noise Management Plan (ANMP) has been prepared by WIAL in accordance with the requirements of its designations under the Wellington City District Plan (the District Plan).¹ This ANMP details the measures to be taken at Wellington Airport to ensure its ongoing compliance with the noise related conditions set out in the Main Site, East Side and Miramar South Designations. This ANMP also ensures that WIAL achieves the general duty set out in section 16 of the Resource Management Act 1991 (RMA or the Act) to avoid unreasonable noise.

1.1 Objective of the Airport Noise Management Plan

The overarching objective of this ANMP is that:

Wellington Airport continues to provide for the ongoing operation and growth of the Airport, while minimising the effects of aircraft and airport noise on the surrounding community.

Wellington Airport has identified ten policies or actions to implement this objective, including:

- 1. To improve awareness of Wellington Airport's noise management obligations and provide the community with certainty as to compliance with the noise limits and effects on all surrounding land uses.*
- 2. To continue dialogue between Wellington Airport and the local community regarding noise management matters at the Airport.*
- 3. To implement the Quieter Homes Programme to ensure the effects of aircraft noise on the community are being appropriately managed.*
- 4. To establish and articulate a clear process for the monitoring and reporting of noise levels at the Airport and actions to be followed in the event of a noise level exceedance.*
- 5. To provide a procedure for dealing with complaints including their recording and any corrective action(s) to be taken, the procedure for identifying non-compliance with designation conditions, and reporting to the Wellington Airport Noise Management Committee (ANMC).*
- 6. To detail noise management practices for engine testing including preferred locations and times.*

¹ At the time of preparing this ANMP, City Council had notified its Proposed Wellington City District Plan ("Proposed Plan"). This ANMP may need to be updated following the issuing of decisions on the Proposed Plan, to account for any changes to the noise management framework insofar as it relates to activities at Wellington International Airport.

7. *To minimise disturbance to residents at night by means of a curfew.*
8. *To minimise and mitigate effects of noise from Auxiliary Power Units (APU) and Ground Power Units (GPU).*
9. *To minimise the amount of construction work carried out at night and mitigate the effects on residents of noise from work which can only be done at night.*
10. *To explore opportunities to utilise new and emerging technology to reduce the effects of airport noise and where appropriate, to advocate for the use of quieter aircraft.*

This ANMP is an evolving document and will be amended and updated in response to noise management practices (including those influenced by technological change) at the Airport. Amendments to the ANMP may be initiated by WIAL in consultation with the ANMC or vice versa. Any amendments to the ANMP will need to be certified by Wellington City Council (the City Council) before taking effect.²

Some additional matters have been included in the ANMP for the assistance of the reader but do not form part of the ANMP. These include for example notes and operational procedures. These matters are clearly identified in the ANMP and are not subject to certification by the ANMC or the City Council.

List of Acronyms

Acronym	Description
ANB	Air Noise Boundary
ANMC	Airport Noise Management Committee
ANMP	Airport Noise Management Plan
ANOMS	Airport Noise and Operations Management System
APU	Auxiliary Power Unit
CAA	Civil Aviation Authority
CARs	Civil Aviation Rules
CNMP	Construction Noise Management Plan
GPU	Ground Power Unit
ICAO	International Civil Aviation Organisation
NMT	Noise Monitoring Terminals
RMA	Resource Management Act 1991
WIAL	Wellington International Airport Limited

List of Definitions

Term	Definition
A-weighting	The process by which noise levels are corrected to account for the non-linear frequency response of the human ear.

² Condition 14 of WIAL4 describes the certification process for this ANMP. It is not detailed in this plan.

Aircraft Movement (or Aircraft Event)	Either a take-off or a landing by an aircraft. For airport traffic purposes, one arrival and one departure of an aircraft counts as two movements.
Air Noise Boundary	<u>Means a boundary shown on the district plan maps, the location of which is based on predicted day/night sound levels of Ldn 65dB from future airport operations at Wellington International Airport.</u>
Alternate	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.
Auxiliary Power Unit	Self powered unit, commonly mounted on the tail cone of any aircraft, to provide autonomous electrical and mechanical (pneumatic or hydraulic) power when the aircraft's propulsion engines are not in operation for the following: Starting power for main engines Pneumatic power for cabin air conditioning Shaft power for other pneumatic and hydraulic systems Backup electrical and pneumatic power for in-flight operations and emergencies Electric and pneumatic power for ground operations with the engines shut down.
Curfew	Time restriction whereby aircraft are not permitted to depart or arrive except in limited circumstances.
dB	Decibel - the logarithmic ratio to the base 10 of two numbers
dBA	The A weighted decibel.
Disrupted flight	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 flight sectors, as a result of: <ul style="list-style-type: none"> • Weather (at origin, en-route, or destination causing cancellations, diversions, delays, missed approaches or holding); or • Air Traffic Control (congestion, start delays, en-route holding or approach delays); or • Closure of a departure or destination aerodrome; or • Diversion for in-flight medical condition or flight safety reason to another aerodrome other than the flight planned aerodrome; or • Aircraft unserviceability (e.g. mechanical breakdown); or • An aircraft being required to wait for crew from a flight delayed as a result of any of the above.
Emergency	Aircraft landing in an emergency, including but not limited to: 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; and The operation of unscheduled flights to meet the needs of a national civil defence emergency declared under the Civil Defence Emergency Management Act 2002
Engine Testing	The testing of one or more engine(s) of a single aircraft. It is the running of engines on an aircraft while it is stationary for the purpose of carrying out mandatory checks following maintenance work.
Land Based Noise	Sound or noise emanating from an aerodrome from sources other than aircraft taking off and landing. These include maintenance activities, APU, surface vehicles and any other sources within the aerodrome boundaries. It excludes the noise from aircraft on the runways and in flight while departing from and arriving at the aerodrome.
Minimise	Reduce to the smallest amount reasonably practicable

Ground Power Unit (GPU)	A fixed or mobile stand-alone unit which can be connected to the electrical system of an aircraft while on the ground to provide power. Some GPUs consist of a generator powered by a diesel engine but more are being powered by electricity. They can be used on different aircraft and is independent of aircraft fuel and can be used as an engine heater and starter power source. They cannot however provide pneumatic air conditioning for inside aircraft cabin.
L_{AE} or SEL	<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.
L_{Aeq(t)}	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.
L_{AF Max}	The A-weighted maximum sound pressure level using the fast time weighting. The highest sound level which occurs during the measurement period.
L_{dn}	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} .
Heads of State or Senior Dignitary	A Head of State is the public person that officially embodies a state in its unity and legitimacy. Depending on the country's form of government the head of state may be a ceremonial figurehead (such as the British Monarchy) or a president. A Senior Dignitary includes the head of government – either the highest or second highest official in the executive branch of a state such as a prime minister, premier, chancellor or equivalent.
Statutory holiday period³	Means: <ol style="list-style-type: none"> 1. The period from 25 December to 02 January inclusive. Where 25 December falls on either a Sunday or Monday, the period includes the entire of the previous weekend. Where 01 January falls on a weekend, the period includes the two subsequent days. Where 02 January falls on a Friday, the period includes the following weekend. 2. The Saturday, Sunday and Monday of Wellington Anniversary weekend, the Sovereign's Birthday weekend and Labour weekend. 3. Good Friday to Easter Monday inclusive. 4. Matariki Day 5. Waitangi Day. 6. ANZAC Day. 7. Any other day decreed as a national statutory holiday. 8. Where Matariki Day, Waitangi Day or ANZAC Day falls (or is recognised) on a Friday or a Monday, the adjacent weekend is included in the statutory holiday period. 9. The hours from midnight to 06:00am immediately following the expiry of each statutory holiday period defined above.

³ Defined in Condition 27(b) of Designation WIAL4

2. Statutory Context

There are a number of authorising bodies and key pieces of legislation which collaboratively manage and monitor aircraft and airport noise generated from Wellington Airport. These are explored further in the following sections.

2.1 International

The International Civil Aviation Organisation (ICAO) is a United Nations body that requires all jet aircraft and helicopters to meet internationally accepted noise certification standards. These standards guide aviation-related legislation in member countries, including New Zealand. In order to ensure environmental protection is maintained in the aviation sector, ICAO also issues guidance on the application of noise abatement procedures.

2.2 National

The RMA is New Zealand's central piece of environmental legislation and provides the foundation for the sustainable management of natural and physical resources. The RMA provides the statutory framework for District Councils to impose controls on noise (via District Plans) and to undertake enforcement action to avoid the generation of unreasonable noise.

Wellington Airport is a network utility and requiring authority under the RMA. This enables Wellington Airport to establish "designations" over land or for activities that relate to its function as an airport authority under the Airport Authorities Act 1966. This is discussed further with respect to the District Plan, in Section 2.3.

The Civil Aviation Act 1990 (the Act) is New Zealand's key piece of aviation legislation.⁴ The Civil Aviation Authority of New Zealand (CAA) is responsible for administering and enforcing the Act and for monitoring civil aviation and security standards established under the Act using Civil Aviation Rules (CARs).

CAR Part 91⁵ and 93⁶ are particularly relevant to the management of aircraft noise. The specific operating traffic rules and noise abatement procedures applicable to Wellington Airport (under the Act) are detailed in CAR Part 93. This information is also set out in the Aeronautical Information Publications ("AIPs") for the Airport.⁷ The noise abatement procedures are protocols that Wellington Airport, as the Airport Operator, has put in place for aircraft on approach and departure to and from Wellington Airport to reduce the effects of aircraft noise on noise sensitive receivers located along the approach and departure paths to the Airport.

2.3 Local

The District Plan sets out the framework for achieving the sustainable management purpose of the RMA. The District Plan includes objectives, policies and rules and other provisions such as designations, which

4 The Civil Aviation Bill currently before Parliament will update this legislation but will not materially affect this Noise Management Plan.

5 Subpart A Aircraft noise and vibration (section 91.13) and Subpart J Operating Noise Limits (section 91.801 to 91.807), https://www.caa.govt.nz/rules/Rule_Consolidations/Part_091_Consolidation.pdf

6 https://www.caa.govt.nz/rules/Rule_Consolidations/Part_093_Consolidation.pdf

7 http://www.aip.net.nz/pdf/NZWN_31.3_31.4.pdf, http://www.aip.net.nz/pdf/NZWN_31.5_31.6.pdf,

http://www.aip.net.nz/pdf/NZWN_31.5_31.6.pdf

control the development and use of land within the district, including the development and use of the Airport.

Under the District Plan, Wellington Airport holds five Designations⁸, including:

- **Wellington Airport Obstacle Limitation Surfaces Designation (WIAL1):** specifies obstacle limitation surfaces around the Airport and its wider surrounding airspace.
- **Wellington Airport Miramar South Area Designation (WIAL2):** provides for activities with an airport purpose on the block of land bordered by Broadway, Kauri Street, Kedah Street and Miro Streets, Miramar.
- **Wellington Airport Runway End Safety Area Designation (WIAL3):** provides for activities associated with the runway end safety area at the southern end of the Airport. This designation will soon be uplifted.
- **Wellington Airport Main Site Area Designation (WIAL4):** provides for activities with an airport purpose at the main Airport site.
- **Wellington Airport East Side Area Designation (WIAL5):** provides for activities with an airport purpose on the southern part of the adjacent Miramar Golf Course.

Four of these designations (WIAL2, WIAL3, WIAL4 and WIAL5) essentially establish a “spot zone” over the Airport and enable a broad range of activities to be undertaken at the Airport without the need for land use consent from the City Council, so long as the activities fall within the scope of the designated purpose and comply with the relevant conditions. The potential effects of activities on the surrounding environment are managed by way of conditions imposed on the designations, and as relevant to this ANMP, include:

1. Limits on the emission of noise from land-based activities;⁹
2. Controls on the hours of operation for land-based activities;¹⁰
3. Controls on construction noise;¹¹
4. Controls on the emission, monitoring and modelling of aircraft noise;¹²
5. Controls on the hours of operation (i.e. a curfew) for aircraft operations;¹³
6. Requirements for the “Quieter Homes Programme” – Wellington Airport’s programme of retrofitting existing (built before 22 March 2012) residential properties within the ANB;¹⁴
7. Controls on engine testing, including the location and time;¹⁵
8. Limitations on the location of aircraft operations;¹⁶ and,
9. Requirements for the development and ongoing implementation of an ANMP.¹⁷

These are elaborated on further in the following sections.

⁸ At the time of preparing this ANMP, the City Council had notified its Proposed Wellington City District Plan (“Proposed Plan”). This ANMP may need to be updated following the issuing of decisions on the Proposed Plan, to account for any changes to the noise management framework insofar as it relates to activities at Wellington International Airport.

⁹ Conditions 10 to 11 and 16 of WIAL2, Conditions 30 and 31 of WIAL4 and Conditions 29 to 31 of WIAL5.

¹⁰ Conditions 17 and 18 of WIAL2 and Conditions 33 and 35 of WIAL5.

¹¹ Condition 12 of WIAL2 and Conditions 35 and 36 of WIAL4.

¹² Condition 23 to 25 of WIAL4 and Conditions 29 to 30 and 32 of WIAL5.

¹³ Condition 26 and 27 of WIAL4.

¹⁴ Condition 28 of WIAL4 and Conditions 40-43 of WIAL5.

¹⁵ Condition 29 of WIAL4, WIAL5 Condition 34 of WIAL5.

¹⁶ Conditions 35 to 37 of WIAL5.

¹⁷ Condition 32-33 of WIAL4 and Conditions 38 and 39 of WIAL5.

3. Sources of Airport Noise

NOTE: For Consultation/Feedback purposes:

Some of the noise sources below are unavoidable and are required by the CAA to ensure the safety of aircraft (for example wildlife/bird management).

Questions:

1. Are there any other sounds that you hear that you believe are generated by the airport that are not listed below?

There are a number of noise sources generated by/from Wellington Airport. Much of this is operational and unavoidable.

3.1 Aircraft Operations

Aircraft operations means the arrival, taxiing and departure of aircraft. This is the most significant source of noise generated by/from Wellington Airport.

Refer to section 4.1 below regarding aircraft operation noise limits and section 5.1 for details about how aircraft operations are managed.

3.2 Auxiliary Power Units

When an aircraft is taxiing to its gate, the pilot will turn on the aircraft's APU. This is a small turbine engine usually located in the rear of an aircraft's fuselage. The APU burns aviation fuel to generate electricity to power the aircraft's systems when the main engines are not running or when not connected to a GPU. APUs are used to start the aircraft engine.

If aircraft air conditioning is required while at a stand during turn around, the APU can be used to maintain an acceptable temperature onboard. This temperature is often quickly exceeded due to heat from either solar gain, presence of passengers, or the running of other onboard systems.

Refer to section 4.3 below regarding noise limits for APUs, and section 5.6 about how APU usage is managed.

3.2 Ground Service Equipment

Ground servicing equipment includes a diverse range of vehicles and equipment necessary to service an aircraft during passenger and cargo loading and unloading, maintenance, and other ground based operations. For example, activities undertaken during a typical aircraft turnaround period include:

- cargo loading and unloading;
- passenger loading and unloading;
- potable water replenishment;
- lavatory waste tank drainage;
- aircraft refuelling;
- aircraft de-icing;
- engine and fuselage examination and maintenance; and
- food and beverage catering.

Airlines employ specially designed ground service equipment to support all these operations. Moreover, electrical power is generally required throughout gate operational periods for both passenger and crew comfort and safety. These services are often provided by ground service equipment.

3.2.1 Ground Power Units

These provide electricity to an aircraft at a stand in order to run the aircraft's electrical systems. An aircraft would otherwise have to generate its own electricity using its APU or main engines. GPUs, however, do not provide sufficient power to run the onboard air conditioning.

A GPU needs to be manually connected to the aircraft after it parks at a stand. Plug in GPUs are connected to a mains power supply and emit less noise than other forms of GPUs.

3.2.2 Air Start Unit

Air Start Units are used when APUs are not operational. These are basically small jet engines on a trailer and provide low pressure – high volume air to the aircraft to replace the APU. When an APU is not operational, both an Air Start Unit and a GPU are used to start the aircraft engine.

Refer to section 4.3 below for noise limits regarding land-based noise which all Ground Service Equipment must comply with.

3.2 Engine Testing

Engine testing is the running of engines on an aircraft while it is stationary for the purpose of carrying out mandatory checks following maintenance work. There is no aircraft heavy-maintenance base at Wellington Airport therefore engine testing only takes place in unplanned, breakdown situations and is therefore not a prominent noise feature from the Airport.

Refer to section 4.2 and 5.5 of the ANMP for how this is managed.

3.2 Construction and Maintenance of Airfield & Night Works

Given the operational constraints of the Airport, the general maintenance or upgrade of operational areas (such as the apron, taxiways, the runway and the road network) often needs to be undertaken during the night when there are no scheduled flights. This work can include:

- remedial and preventative maintenance to the pavement areas, and other critical aeronautical infrastructure; and
- other minor and frequent activities such as mowing, spraying and fertilising of the areas within the airfield.

Refer to section 4.3 and 5.11 of the ANMP for details as to how Wellington Airport's construction and maintenance noise is managed.

3.3 Wildlife Management

Keeping the presence of birds away from the Airport is important for the safety of aircraft and passengers and WIAL is required by the CAA to manage this serious risk. The Airport uses a number of controls to manage the risk of bird strike (including passive methods such as grass management, tree management, waste management, roosting inhibitors, effigies, chemical deterrents etc.), however, on occasion, more active management is required, resulting in loud noises to scare away the birds. This tends to be at sunrise and sunset when wildlife is most likely to cause a strike with aircraft due to their behavioural patterns, and increased traffic volumes.

These loud noises can include (but are not limited to):

- Vehicle Patrols – vehicle lights and horns can be used to herd and disperse birds.
- Sirens are used in the operations vehicles, and atop the main terminal roof. These can produce a variety of sounds to choose from (different bird species' distress calls, a digital siren, etc.,) and are changed regularly so birds don't get used to them.

- Firearms – these are used as a last resort when there is imminent danger to aviation or a first resort for pest species such as spur-winged plovers, magpies and rabbits. Firearms are occasionally used to condition wildlife to avoid non-lethal deterrents also.
- Pyrotechnics – Wellington Airport uses various types:
 - Bangers – short range with loud bang often used with a screamer.
 - Screamer – loud screeching noise.

3.4 Airport Fire Station

The current airport fire station is located on the eastern apron to the north of the terminal building. The majority of the noise generated by the operation of the Airport Fire Station is from routine testing and exercises related to emergency services. These are intermittent but generally occur once or twice a day.

Emergency equipment is tested on a weekly basis, such as chainsaws and cutters. This testing is usually undertaken in the morning and the type of equipment tested varies each day and takes place for less than 10 minutes. There is also the occasional testing of the outboard motors for the emergency marine rescue boats.

The proposed new Airport fire station, which is to be built on the western apron adjacent to Coutts Street, will have its own bespoke operational noise management plan given its proximity to the nearby residential areas.

DRAFT

4. Noise Limits at Wellington Airport

NOTE: For Consultation/Feedback purposes:

The Noise Limits outlined in this section are imposed by the Wellington Airport Designations in the District Plan. These have been confirmed by the Environment Court.

Accordingly the limits are not able to be changed and therefore any feedback on these limits is unable to be considered.

The extent to which the community is affected by noise from Wellington Airport (as outlined in Section 3) is caused by a wide range of factors. These include the type of aircraft, the number of **aircraft movements**, the hours of airport operations, air space management, the proximity of the activities, topography, and the local weather conditions.

In the following sections, the ANMP details the noise limits for aircraft operations, engine testing and land-based noise at Wellington Airport. The noise limits and rules set out below are in accordance with the noise-related conditions imposed on the relevant Wellington Airport Designations.

4.1 Aircraft Operations

The District Plan depicts an Air Noise Boundary (ANB) around the Airport (Appendix A). Within this area, aircraft operations must be managed such that aircraft noise exposure does not exceed 65dBA L_{dn} at or outside of the ANB. This is based on the total noise produced by all aircraft movements during a typical day, evenly measured over a rolling 90 day (3 month) period. The L_{dn} is calculated and modelled annually, with the Annual Noise Contour representing the location of the 65dB L_{dn} contour for that year.

The location of the ANB is based on projected aircraft volumes and types, growth estimates, topography and has been “cadastralised” around the boundary of properties and roads.

4.2 Engine Testing

Engine testing at the Airport is generally restricted to the hours of 0600 to 2000, and within the areas identified in Appendix B.¹⁸ There shall be no engine testing within the East Side Area.¹⁹

Engine testing may also occur outside of the above specified hours under the following limited circumstances:²⁰

- For essential unscheduled maintenance, provided it occurs between 2000 and 2300, it is reported to the ANMC and is published on Wellington Airport’s website as soon as reasonably practicable.
- To operate an aircraft within flying hours provided the engine run is no longer than required for normal procedures and comprises a short duration engine run by way of flight preparation while the aircraft is on the apron; or,
- Between the hours of 2300 and 0600, provided all of the following are complied with:
 - The engine testing does not generate noise at or within the boundary of any residential zone that exceeds the limits described in Table 1;
 - The engine test is for aircraft using the Airport as an alternative landing site;
 - The total number of engine test events shall not exceed 18 in any consecutive 12 month period; and,
 - The total engine test duration is no longer than 20 minutes.

18 Condition 29(a) and (b) of WIAL4.

19 Condition 34 of WIAL5.

20 Condition 29(c) to (e) of WIAL4.

Table 1: Engine testing limits.

Day	Time	Noise Limit
All days	2300 to 0600	60 dB L_{Aeq} (15 min)
All days	2300 to 0600	75 dB L_{Amax}

4.3 Operating Ground Power and Auxiliary Power Units (GPUs/APUs)

The operation of GPUs and APUs within the Main Site Area shall not exceed the limits set out in Table 2 when measured at any adjoining Residential zone:²¹

Table 2: GPU and APU noise limits.

Day	Time	Limit
Monday to Saturday	0700 to 2200	55 dB L_{Aeq} (15 MIN)
All other times		45 dB L_{Aeq} (15 MIN)
All days	2200 to 0700	75 dB L_{Amax}

APU usage associated with the following activities is exempt from the limits set out in Table 2:

- APU usage associated with the towing of aircraft;
- APU usage 60 minutes prior to a scheduled departure or 60 minutes after the aircraft has stopped at on the gate, unless a longer duration is required for operational or public health and safety reasons;
- APU usage associated with engine testing.

The operation of APUs within the East Side Area shall be managed so the rolling 90 day average 24 hour high-weighted sound exposure, when combined with aircraft operations, does not exceed 65 dB L_{dn} at the location specified in Appendix C.²²

In addition, the usage of APUs within the East Side Area:

- Is restricted to a period not exceeding 15 minutes after an aircraft has stopped at the gate or prior to leaving the gate.²³
- Shall cease between the hours of 10pm and 7am, apart from usage associated with aircraft under tow.²⁴

GPUs are also required to be available at all stands within the East Side Area.²⁵

4.3 Land Based Noise

4.3.1 Miramar South Area Designation

Noise emission levels from any site within the Miramar South Area, when measured at any location that includes an occupied residence located within the adjacent Outer Residential Area or any location within the Centre Zone, shall not exceed the limits set out in

Table 3.²⁶

²¹ Conditions 30 WIAL4.
²² Condition 29 WIAL5.
²³ Condition 33 of WIAL5.
²⁴ Condition 35 of WIAL5.
²⁵ Condition 36 of WIAL5.
²⁶ Condition 10 of WIAL2.

Table 3: Noise limits for land based noise within the Miramar South Area.

Day	Time	Limit
Measured at Outer Residential Area		
Monday to Sunday	0700 to 2200	55 dB L _{Aeq} (15min)
Monday to Sunday	0100 to 0600	40 dB L _{Aeq} (15min)
At all other times		45 dB L _{Aeq} (15min)
All days	2200 to 0700	75 dB L _{AFmax}
Measures at the Centre Zone		
At all times		60 dB L _{Aeq} (15min)
		85 dB L _{AFmax}

Noise limits for building services are to be at least 10 dB lower than the limits described in

Table 3 above.²⁷

The following also apply between the hours of 10pm and 7am:²⁸

- Warehouse doors are to remain closed unless in use; and
- There shall be no outdoor servicing or maintenance of equipment.

4.3.2 Main Site Area Designation

Noise emissions from any activity within the Main Site Area, other than aircraft operations, engine testing and the operation of APUs, when measured at any adjoining Residential Zone shall be managed to ensure the limits identified in Table 4 are achieved.²⁹

Table 4: Noise limits for land based noise within the Main Site Designation.

Day	Time	Limit
Monday to Saturday	0700 to 2200	55 dB L _{AEQ} (15 MIN)
All other times		45 dB L _{AEQ} (15 MIN)
All days	2200 to 0700	75 dB L _{AEQ} max

4.3.3 East Side Area Designation

Noise emissions from any activity within the East Side Area, other than aircraft operations and the operations of APUs, when measured at any adjoining Residential Zone shall be managed to ensure the limits identified in Table 5 are achieved.³⁰

Table 5: Noise limits for land-based noise within the East Side Designation.

Day	Time	Limit
All days	0700 to 2200	55 dB L _{AEQ} (15 MIN);
	All other times	45 dB L _{AEQ} (15 MIN);
	2200 to 0700	75 dB L _{AFmax}

²⁷ Condition 16 of WIAL2.

²⁸ Conditions 17 and 18 of WIAL2.

²⁹ Condition 31 of WIAL4.

³⁰ Condition 31 of WIAL5

5. Noise Management

NOTE: For Consultation/Feedback purposes:

1. The Noise Abatement Procedures (refer 5.2 below) are unable to be altered via the Noise Management Plan.
2. The Airport Curfew (5.4 below) is set in the Airports Designation and cannot be altered via the Noise Management Plan

Questions:

1. Is there anything else Wellington Airport could do to better manage the noise issues below, notwithstanding those rules which we cannot alter ourselves?
2. What are the best ways Wellington Airport could communicate with residents on noise issues, such as night works? (Note that we send out a regular notification email to those that are interested; to register, just email us at wellingtonairport@wellingtonairport.co.nz)

This section of the ANMP outlines the measures that will be undertaken by Wellington Airport to progressively remedy and mitigate the potential noise effects from activities being undertaken at Wellington Airport. It includes measures both required by Wellington Airport's designation, as well as other measures volunteered by Wellington Airport as a responsible airport operator and neighbour.

5.1 Managing Airport Noise

Wellington Airport is responsible for providing and maintaining airport infrastructure such as terminals, runways, airport parking and other infrastructure to facilitate the operations of the airport. While Wellington Airport does not directly manage aircraft movements or conduct aircraft engine testing, Wellington Airport is responsible for ensuring all operators conduct airport operations and aircraft engine testing in a way that follows the noise limits specified in its designations.

Wellington Airport is conscious of the effects of airport noise on the local community and the surrounding environment and is dedicated to its ongoing monitoring and continuous management. Over the past 20 years the overall noise generated by the Airport has been significantly reduced, despite an overall increase in activity. This reduction is a result of substantial investment in new technology by the airlines and the Airport, as well as a continuous commitment to reducing Airport noise.

Such noise reduction measures include:

- Improvements to Airport, airline and contractor equipment such as investment in quieter (electric) ground service equipment and construction machinery, in addition to changes in aircraft technology which have produced new generations of aircraft that are up to 30% quieter;
- The implementation of the airport's curfew that has effectively eliminated most airport noise between midnight and 6am;
- Working to discourage new noise sensitive activities from being built close to the airport;
- Providing noise mitigation packages for qualifying homes close to the airport (Quieter Homes Programme);
- Noise abatement procedures designed especially for Wellington Airport, including smarter flight paths that generate less noise over residential areas; and,
- Giving the public direct and timely access to noise information so anyone can monitor and enquire about flights online.

Wellington Airport continues to look for opportunities to reduce airport noise and reports to the ANMC on international developments in technology or procedures that may assist with achieving this outcome.

When designing changes to the configuration and layout of the Airport, Wellington Airport is conscious of the impact of noise on nearby residents and other activities. Airport Masterplans take noise mitigation into

account, balanced with the need for efficient and effective land use for operational purposes. For the upcoming East Side expansion, this balance is reflected in the provision for a remaining green belt between the expanded apron space and residential areas, conditions on the types of activities that can take place within the area, and curfews on particular activities.

5.2 Noise Abatement Procedures

Airways New Zealand is the body responsible for managing the day-to-day air navigation and air traffic management across New Zealand. This includes managing take-offs, landing and taxiing of aircraft at the Airport. Airways New Zealand adhere to the CAA standards and communication procedures, when controlling air traffic movement.

Noise generation after take-off and before landing is authorised under the Civil Aviation Act and related regulation and rules. In general, under the Aviation rules, aircraft are allowed to fly 500 ft above a non-congested area and 1000 ft above a congested area, unless there are specified Noise Abatement Procedures. There are Noise Abatement Procedures specific to Wellington Airport which pilots must comply with which specify areas where aircraft should not overfly at an altitude lower than specified.³¹

Monitoring compliance with these rules are not within the responsibility of the Airport itself. As long as the aircraft operators comply with the CAA rules/Noise Abatement procedures, then they are permitted to fly where they want. If it is found that an aircraft operator has not complied with these rules, the matter will be referred to the CAA.

5.3 Exclusion of “Noisy” Aircraft

CAA and ICAO have established standards around acceptable aircraft noise levels³². Aircraft that do not meet these well-established industry standards are not permitted to visit under Wellington Airport’s designation.

All aircraft are monitored in accordance with the 90-day rolling average. This means that individual aircraft may exceed 65 decibels, so long as the typical day’s average does not exceed 65 decibels.

In the unlikely event that a particular aircraft causes non-compliance with the noise allowances at the ANB, then the Airport will exclude the aircraft from operating at the airport.

5.4 Wellington Airport Curfew

In order to reduce the effects of night-time noise and to minimise disturbance to residents, Wellington Airport has a curfew³³ which restricts the hours of aircraft operations. Aircraft operations at Wellington Airport are restricted to the following hours:

- Domestic Aircraft Operations:³⁴ 6am to 12 midnight
- International Aircraft Operations:³⁵ Departure 6am to 12 midnight
Arrival 6am to 1am
- Aircraft Operating under main engine power within the East Side Area:³⁶ 7am to 10pm

Outside of these hours, some aircraft operations are exempt from the curfew. This includes:³⁷

³¹ Condition 33(iv) of WIAL4.

³² Part 91, Subpart J: Part 91 - General Operating and Flight Rules - 1 December 2021 (aviation.govt.nz)

³³ Condition 26 of WIAL4.

³⁴ Condition 26 of WIAL4.

³⁵ Condition 26 of WIAL4.

³⁶ Condition 37 of WIAL4.

³⁷ Condition 27 of WIAL4.

- Aircraft operating in an emergency, including medical and civil defence emergencies;
- Disrupted flights where aircraft operations are permitted for an additional 30 minutes;
- During statutory holiday periods, where aircraft operations are permitted for an additional 60 minutes;
- Aircraft carrying heads of state/senior dignitaries acting in their official capacity or other military aircraft movements; or,
- Up to four aircraft operations per night with noise levels not exceeding 65 dB L_{AFmax} (1 sec) at the ANB³⁸.

Monitoring data from the Airport Noise Monitoring System (refer to section 6.2) is used to generate “Night Movement Reports”. These reports incorporate flight observation data provided by Airways New Zealand and are used by Wellington Airport to confirm the curfew procedures have been met. Curfew reports are provided to the ANMC as part of the meeting agenda.

5.5 Engine Testing

Aircraft engine testing is generally required as a part of pre-flight checks following maintenance and repairs. These tests are undertaken by airline operators or repair companies, who are responsible for managing when, where, and how these tests are conducted. In general, these tests are completed outdoors which increases the chances that testing could affect neighbouring residents. Engine testing at Wellington Airport generally only takes place in unplanned or breakdown situations. It is therefore not usually a prominent noise feature of the Airport. However, to mitigate the effects of engine testing on surrounding residents, and in addition to the noise limits set out in section 4, Wellington Airport has defined specific areas within the Main Site Area where engine tests may not occur (Appendix B). No engine testing is allowed within the East Side Area.³⁹

Wellington Airport has established procedures for operators to report engine tests, as well as guidelines to educate and assist airport users to comply with the engine testing requirements of the designation. If the Airport is given a reasonable advance warning by an aircraft operator of the need for a high-powered engine test, it will endeavour to notify its residential neighbours by posting on local and resident association social media pages.

Wellington Airport ensures it follows best practice engine testing procedures and keeps well informed of potential changes in technology and improvements to airport equipment that could potentially minimise and mitigate the effects of engine testing on surrounding residents.⁴⁰

5.6 Ground Power and Auxiliary Power Units

GPUs are quieter than APUs. Electric GPUs are quieter than diesel GPUs.

In an ideal world, upon arrival, an aircraft would taxi to its allocated gate, plug into an electric GPU to provide any required power for ground servicing, and turn off its APU until it needed to start its engines again for departure. However, GPUs do not provide enough power to provide pneumatic air conditioning into some aircraft cabins, and therefore for health and safety reasons, air crews sometimes continue to keep their APUs running to provide cabin air conditioning, especially on short turn arounds (for the comfort of both crew, ground service staff and passengers).

At some airports internationally, the bridges/gates are fitted with pre-conditioned air units (known as PCAs), which can be installed alongside GPUs so that APUs are not required for this purpose. Wellington Airport are investigating the Airport’s technical compatibility to support this, with the intention of potentially rolling this out as gate infrastructure is replaced and further development occurs.

38 List of exempt aircraft and criteria for this exemption are outlined in Appendix 3
 39 Condition 34 of WIAL5.
 40 Condition 33(i) of WIAL4.

The Wellington Airport designations (WIAL4 and WIAL5) set noise and operational limits on the use of APUs and GPUs to minimise and mitigate their noise effects on residential neighbours (refer to section 4.3 above).

In terms of GPU infrastructure assets at Wellington Airport, all of the regional gates have electric plug-in GPUs. Three jet bridge gates also have electric GPUs installed. Other gates have standalone diesel GPUs available.

GPU usage is currently performed at the discretion of air crews. Consultation with ground operators has confirmed that the electric GPUs at the regional gates are consistently used by the turboprops, and that the standalone diesel GPUs at these gates are employed only on occasions where electric GPUs are unavailable at the gate or temporarily out-of-commission.

The current usage of the electric GPUs on the jet bridge gates is currently sporadic and intermittent. According to the airlines, the reason for this due to:

1. Operational constraints that may inhibit the routine usage of electric GPU on jet aircraft turnarounds, particularly on short (30-40 minute) turns. These concerns are related to ground crew workload and health and safety implications.
2. The absence of airline-stipulated standard operating procedure around electric GPU usage which frequently results in flight crews opting for APU only on turnarounds, even when electric GPUs are present.
3. Inconsistent availability of electric GPUs at all gates, making standard operating procedures difficult for ground operations crews.

WIAL is therefore working with airlines and ground service operators to try and increase the use of GPUs while aircraft are at the stands and to assess the continued rollout of electric GPU supporting infrastructure across all jet bridges. The resolution of operation and health and safety related concerns is necessary for systematic rollout of GPU supporting infrastructure across remaining jet bridge gates, to ensure entrenched and consistent airline usage.

WIAL is encouraging airlines to phase out the use of diesel GPUs for both noise minimisation and sustainability purposes.



Figure 1: Electric GPU Stands at Wellington Airport. Green areas – Regional Gates where electric GPUs are available and consistently used, mauve area – Jet aircraft stands with electric GPUs available; and blue area – where the cabling and transformation equipment has been installed, however there is no electric GPU at this stage.

When the East Side Area designation is developed for aircraft operations into the future, Wellington Airport will also ensure that all stands will be equipped with plug in (i.e. electric) GPUs to minimise the noise effects associated with APU and GPU usage for neighbouring properties within this area. As noted in section 4.3 above, stricter conditions are imposed on the use of APUs within the East Side Area due to its proximity to residential neighbours.

5.8 Stakeholder Communications Plan

To ensure ongoing dialogue and communication between Wellington Airport and the surrounding community, within six months of this ANMP being certified the City Council, Wellington Airport will prepare a stakeholder communication plan for the forthcoming twelve month period.⁴¹ This plan will be an evolving document and will identify Wellington Airport's intended community engagement initiatives for the forthcoming year with respect to airport noise.

The Stakeholder Communication Plan will be presented to the ANMC, with any updates or changes to the plan presented to the ANMC at their quarterly meetings, along with a brief rationale of the drivers behind the update or change.

⁴¹ Condition 33(i) of WIAL4.

The current Stakeholder Communication Plan may be included as part of this ANMP for ease of reference but does not form part of the ANMP.

5.9 Airport Noise Management Committee (ANMC)

The Wellington ANMC was originally formed in 1997 and provides a platform for community and industry representatives to advise on the Airport's ANMP.

The ANMC membership comprises of ten representatives and an independently appointed chairperson. The Terms of Reference for the ANMC, including its purpose, membership, meeting procedures and functioning are set out in detail in Appendix D. The process for electing community representatives is also detailed in the Terms of Reference.

5.10 Quieter Homes Programme

The Quieter Homes Programme has been established to reduce the effects of aircraft noise on residents. As part of this initiative, WIAL offers homeowners within the Airport's ANB a subsidised package of acoustic mitigation designed to reduce aircraft noise in habitable rooms to a day/night average (L_{dn}) of 45 decibels.⁴² The Quieter Homes Programme is offered to all homes within the ANB and built before 22 March 2012, with either a 100% or a 75% subsidy of the cost depending on the degree of aircraft noise experienced at the property.⁴³ As part of the package, WIAL has also offered to purchase all properties located within the 75 L_{dn} noise contour.

The phased roll out of the "Quieter Homes" acoustic mitigation commenced in April 2016 and is managed by area, starting with those properties that experience the highest exposure to aircraft noise (Figure 2). The Quieter Homes packages are tailored to the individual needs of each property and are based on the proximity to the airport, the dwelling construction and the level of noise exposure. As keeping doors and windows closed substantially reduces the impact of external noise levels, all packages will include a mechanical ventilation system. In some cases, the ceilings, walls, windows and doors may require further treatments such as insulation, acoustic glazing or new seals to be installed.

The ANMC is kept regularly updated on the progress of the Quieter Homes Programme and more information about the offer and additional fact sheets are available on the Wellington Airport website (www.wellingtonairport.co.nz/noise/quieter-homes/).

5.10.1 Future development of the East Side Area

The East Side Area currently comprises part of the Miramar Golf Course. In the short term, this use will remain until Wellington Airport requires this land for airport purposes.

Prior to the East Side Area being developed, WIAL shall update this ANMP to set out its intended methodology for providing mechanical ventilation to the 64 residential properties that are identified in the East Side Area designation as been affected by noise emissions from this area.⁴⁴

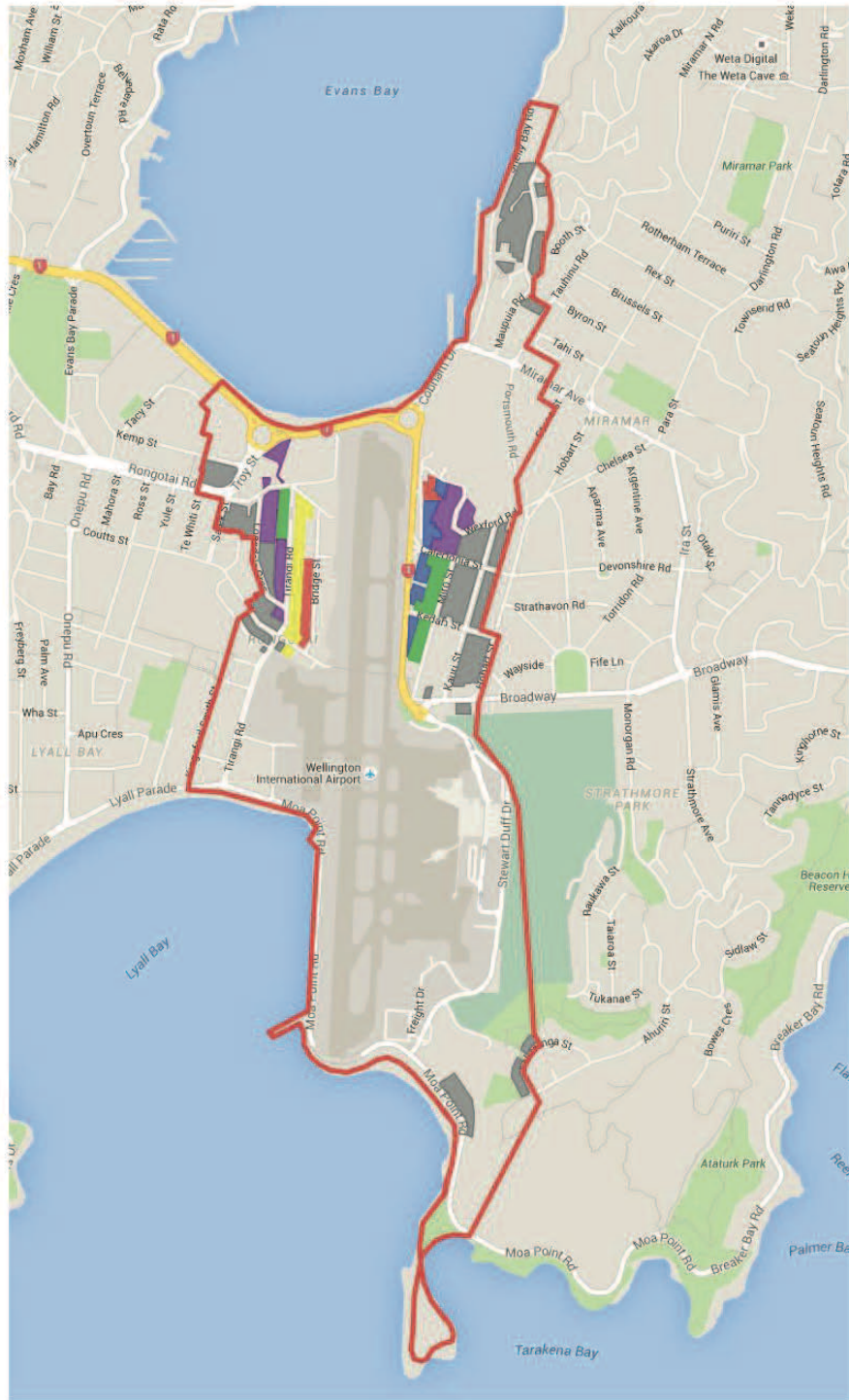
⁴² Condition 28 of WIAL4.

⁴³ As defined by the LUMINS study – refer to www.wellingtonairport.co.nz/noise/quieter-homes for more detail.

⁴⁴ Conditions 40 to 43 of WIAL5.



QUIETER HOMES



KEY

	Indicative timeframe for Quieter Homes offer in your area
■ Area 1	Completed
■ Area 2	Completed
■ Area 3	Near Completion
■ Area 4	Underway
■ Area 5	2023
■ Area 6	2024
— Air Noise Boundary	

Please note:

The above timeframes are indicative only and are subject to change. The delivery of acoustic mitigation to homes will be determined by the acceptance rate of the offer in each area.

*Dates revised March 2021.
This update November 2022.

Figure 2: Quieter Homes Rollout Map, November 2021.

5.11 Construction Noise Management Plan

WIAL regularly undertakes construction and maintenance works within the airport. Operational constraints mean that often these works need to be carried out during the night.

Wellington Airport currently has an Airport Wide Construction Noise Management Plan (CNMP) in place. The purpose of the Airport Wide CNMP is to develop and implement procedures and strategies with the aim to minimise the disturbance to residents and other noise sensitive receivers caused by airport construction and maintenance works.⁴⁵ The Airport Wide CNMP establishes the approach to considering and managing the effects of construction noise for Wellington Airport construction and maintenance projects. A copy of the Airport Wide CNMP is in Appendix E of this Plan.

The Airport Wide CNMP attached in Appendix E is intended for general airport construction and maintenance works. Where more complex projects are proposed (i.e. those that are longer term, include multiple sites or extensive night time works), a detailed project specific CNMP may be required. Any development of the East Side Area will remain subject to specific CNMP requirements in accordance with relevant conditions on the East Side Area designation.⁴⁶

Project specific CNMP's are discussed with the ANMC, and information regarding these projects are published in the WIAL website.⁴⁷

5.12 Military Aircraft Operations

The New Zealand Defence Force is permitted to undertake activities at Wellington Airport. While the New Zealand Defence Force is responsible for ensuring its own activities either comply with the relevant District Plan requirements and/or have the appropriate authorisations in place, it is WIAL's expectation that the New Zealand Defence will comply with all the relevant requirements set out in this ANMP.

⁴⁵ Condition 35 and 36 of WIAL4.

⁴⁶ Conditions 14 to 27 of WIAL5.

⁴⁷ www.wellingtonairport/noise/construction-noise

6. Noise Monitoring Programme

NOTE: For Consultation/Feedback purposes:

Questions:

1. Do you have any feedback on how Wellington Airport monitors noise?

Noise management and compliance with our noise management obligations is of utmost importance to WIAL. Accordingly, both continuous and periodic monitoring and modelling of noise at Wellington Airport is undertaken by WIAL. This data is used to inform land use practices at the Airport, confirm compliance with noise management obligations, and provide the community with assurances that WIAL is fulfilling its duty to avoid unreasonable noise.

To assist with noise monitoring, Wellington Airport uses an acoustic consultant to operate a monitoring programme that has been designed to capture noise level readings of the on-going operations at the Airport.

The monitoring programme, locations and procedures for reporting exceedances is set out further in the following sections.

6.1 Measuring Aircraft Noise

Aircraft noise at Wellington Airport is measured in accordance with NZS 6805:1992.⁴⁸ It is based on the Day/Night Sound Level (L_{dn}) which measures the cumulative 'noise energy' produced by all flights (landing or take-off) during a typical day, evenly measured over a rolling 90 day period. A 10 decibel penalty is applied to flights from 10pm to 7am to take account of the increased disturbance caused by noise at night.

As described in section 4.1, aircraft operations at Wellington Airport are allowed to generate up to 65dB L_{dn} when measured at the ANB. This is based on the total noise produced by all aircraft movements during a typical day, evenly measured over a rolling 90-day period. This means that individual aircraft may exceed 65 decibels, so long as the typical day's average does not exceed that level.

Aircraft noise is monitored at three sites around the airport at the ANB. The monitoring system enables WIAL to evaluate whether the total aircraft noise generated is within the levels set out in the designations. As a result of this compliance monitoring, WIAL can demonstrate that noise generating activities consistently comply with its Designations noise requirements.

In addition to the above, each year WIAL prepares an Annual Aircraft Noise Contour which demonstrates compliance with the 65 dB limit at the ANB. These contours also show how Wellington Airport is tracking with respect to the capacity of the for growth of aircraft movements within the ANB and helps to inform the Quieter Homes Programme described in section 5.10. These contours are provided to the ANMC and published on Wellington Airport's website.

6.2 Airport Noise and Operations Monitoring System

WIAL has developed an Airport Noise and Operations Monitoring System (ANOMS) for the purpose of monitoring and reporting on aircraft noise which can then be used for demonstrating ANB compliance and investigating noise complaints.⁴⁹

⁴⁸ Condition 24 of WIAL4.

⁴⁹ Condition 23 of WIAL4.

A copy of the current ANOMS information brochure may be included in the ANMP for ease of reference but does not form part of the ANMP.

Aircraft noise monitoring at Wellington Airport is provided under a Services Agreement between WIAL, the City Council and Envirosuite Ltd. Under this agreement, the following services are provided:

- Hosted ANOMS service, including technology upgrades, software and data backup and software upgrades;
- Lease of three 3639-A fixed Noise Monitoring Terminals (NMT) located within the ANB;
- Installation, commission and setup of supplied equipment and services;
- NMT hardware insurance (fixed locations), fault repairs and preventative maintenance;
- Monthly reporting as specified; and,
- All equipment (including noise monitoring terminals and tilt masts) remains the property of Envirosuite

The ANOMS data is compiled by Envirosuite Pty Ltd, and WIAL receives the following reports monthly:

- 90 day LDN (by NMT);
- Daily LDN (by NMT);
- Night movement (curfew) report;
- Aircraft Operations (operation type and aircraft type);
- Uncorrelated Aircraft Analysis; and,
- A calibration report (by NMT).

These reports and graphs (i.e. all of the reported information owned by WIAL) are included in the ANMC agenda and published on Wellington Airport's website.

6.3 Monitoring locations

Using the ANOMS, noise monitoring is conducted using three 3639-A fixed NMT located within the ANB at NMT 1 -Rongotai (Rongotai College), NMT 2 -Maupuia (Akaroa Drive) and NMT-3 Kekerenga (corner of Ahuriri & Kekerenga Streets, Strathmore Park), as shown in Figure 3.

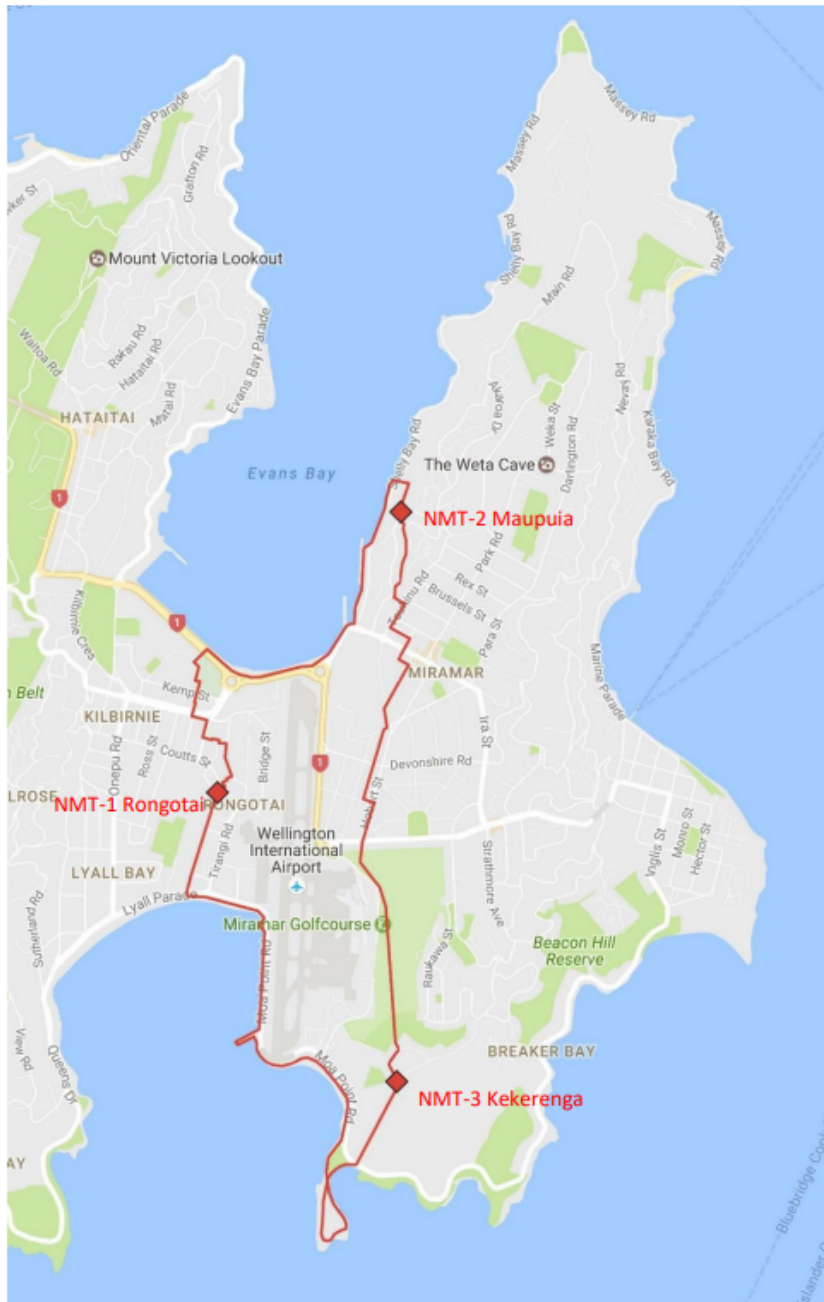


Figure 3: Air Noise Monitoring Terminal Locations.

6.4 Noise Level Exceedances

In the event that monitoring determines that noise levels at the Airport have exceeded the limits set out in section 4, including both aircraft and land-based noise, the following procedures will be followed:

1. WIAL will immediately advise the ANMC and the City Council of the non-compliance event. WIAL shall provide a report by a person suitably qualified in acoustics stating the extent of the non-compliance and its significance.
2. WIAL will investigate the source and reason for the non-compliance event(s).
3. WIAL will also determine whether the non-compliance event(s) is part of a broader trend or pattern of events.

4. If necessary WIAL will meet with the airport operators concerned and jointly identify possible mitigation measures.
5. WIAL will produce a report outlining the outcome of its investigation into the non-compliance event(s).
6. A review of the report, and any recommendations or mitigation proposed by WIAL, will be undertaken by the ANMC.
7. WIAL will take all practicable steps to:
 - a. remedy the non-compliance.
 - b. ensure that another non-compliance does not occur.

NOTE: the actual remedial method will be determined in the event of a non-compliance.

DRAFT

7. Complaints

NOTE: For Consultation/Feedback purposes:

Questions:

1. Are there any additional ways that the airport could receive complaints?
2. Do you have any feedback on Wellington Airport's procedures for handling complaints?

7.1 Complaint Handling

This section outlines WIAL's standard procedures for recording, responding to, and reporting on any noise complaints it receives from the community in relation to aircraft operations, engine testing and any other noise generated at Wellington.

WIAL documents all noise complaints on a Noise Complaint Register.

7.2 Lodging a Complaint

Complaints can be made to Wellington Airport via the following means:

- Email: airnoise@wellingtonairport.co.nz
- Telephone: 0508 AIRNOISE (0508 247 664) (voicemail), or via main airport phone number 04 385 5100)
- Website: Noise enquiry form (wellingtonairport.co.nz) and via Webtrak in relation to a particular aircraft
- Writing: PO Box 14175, Wellington

WIAL also receive complaints via:

- the City Council Noise Team; and
- the resident representatives on the ANMC.

If a complaint is received via an email or the website, an automatic response is sent to the complainant acknowledging receipt of the complaint and informing complainant that WIAL will respond to the complaint within three working days.

Within 48 hours of receiving a message on the AIRNOISE voicemail, WIAL will respond to the complainant to let them know that their complaint has been received and that WIAL will investigate.

7.3 Investigations

WIAL staff (via the Airport Planning Manager) will investigate the source and cause of the noise, then notify the complainant by email or phone call of the outcome of the investigation.

In order for WIAL staff to investigate a noise complaint, the complainant must provide details including an approximate time, description and location of the noisy activity. WIAL staff will contact the complainant to find out this information if it has not been provided in the initial complaint.

The investigation will attempt to identify the cause of the noise event. A written response outlining the conclusion of the investigation undertaken by WIAL staff will be provided to the complainant. Any complainant unhappy with the outcome of the response or investigation into their complaint can contact one of the resident representatives on the ANMC to follow up the matter further.

If the investigation reveals that the noise did not originate at the airport, WIAL will advise the complainant and refer them to the City Council.

Low flying and flight path complaints will be reviewed to ensure the flight is in accordance with any relevant CAA flight protocol. If circumstances are unusual, WIAL will refer the matter to the aircraft operator for comment prior to responding to the complainant and if appropriate refer the matter to the CAA for their action.

7.4 Non-Compliances

In the event that a non-compliance with the designation conditions is found, the following procedures will be followed:

- WIAL Planning Manager will immediately advise the City Council and the ANMC of the non-compliance and notify complainant;
- WIAL will investigate the source and reason for the non-compliance event by:
 - meeting with the airport operators concerned to identify if the non-compliance was a result of human error, mechanical/operational issues, or non-conformity of the ANMP (refer below if this is the case); and,
 - determining whether the non-compliance event is part of a broader trend or pattern of events;
- WIAL will take all practicable steps to:
 - remedy the non-compliance; and,
 - ensure that another non-compliance does not occur;
- WIAL will produce a report outlining the outcomes of its investigation into the non-compliance events. This will be sent to the Noise Compliance Team at the City Council; and,
- The outcome of the investigation by WIAL and the City Council will be reported to the next ANMC Meeting.

In the event that a non-compliance with this ANMP is found (i.e. a non-compliance with procedures in the ANMP rather than designation conditions themselves), then this will be reported at the next ANMC meeting outlining any corrective actions that have since been taken to ensure that this is not repeated, and the complainant will be informed

7.5 Analysis and Reporting

A summary of the noise complaints is included as an agenda item for each ANMC meeting. The summary includes brief details of the complaint, and the outcome of the investigation. A graph showing the number and type of complaint by month over the last three years is included in the summary.

The complaint summary is analysed from time to time to identify any trends that may be occurring. Remedies to mitigate increasing levels of noise will be investigated, with the Best Practical Option considered for implementation.

8. Noise Management Website

NOTE: For Consultation/Feedback purposes:

Consultation Questions:

1. Do you have any feedback on the information on Wellington Airport's noise management webpages? Is it helpful? Easy to find?
2. Is there any other information that you would expect to see in relation to noise on our website?

Wellington Airport has a webpage that is dedicated to airport noise. This includes information about construction noise (this outlines current construction projects being undertaken at the Airport), Quieter Homes (this outlines information about our Quieter Homes Programme) and airport noise (which outlines how we manage aircraft noise).

9.1 Airport Noise Management Plan

The previous and the current ANMP will be made available for download on Wellington Airport's website.

<https://www.wellingtonairport.co.nz/noise/air-noise/>

9.2 Aircraft Operations

WIAL is committed to providing timely information and giving the community the opportunity to provide feedback on aircraft noise and how it impacts them.

While WIAL is not responsible for flying the planes themselves or setting flight paths, WIAL is responsible for communicating with the public about aircraft noise from planes which use the airport.

WIAL has an online flight monitoring system "Webtrak" which is accessible to the public from Wellington Airport's website. This system can be used to view **aircraft movements** and make a complaint or enquiry about aircraft noise.

The flight search and display options on Webtrak allows a person to view information about aircraft type, height, origin and destination, and the location of flight paths in relation to their home. By clicking on the aircraft and selecting the speech bubble, feedback can be provided to Wellington Airport about a particular flight.

For security reasons, the information available on Webtrak has a 15 minute delay after the aircraft movement has occurred. The movement data is stored and accessible on Webtrak for up to 90 days.

9.3 Airport Noise Monitoring

As described in section 6, WIAL undertakes comprehensive noise monitoring. Noise monitoring data is reported to the ANMC and is an ongoing agenda item discussed at each meeting.

Following each meeting, the noise monitoring report will be made available for the public to download from Wellington Airport's website.

Following each ANMC meeting, the minutes of the previous meeting are uploaded to the Wellington Airport website, along with LDN tables for each month and a graph showing the 90 day rolling average.

9. Review

This ANMP is intended to be a dynamic management document to ensure continual improvement and adherence to the overarching objective of the ANMP described in section 1. It sets out the management procedures, processes and controls which cover all aspects of mitigating noise impacts.

The ANMP will be regularly reviewed in line with good operational practice and to reflect any improvements in noise measurement techniques and noise mitigation measures. It is therefore subject to change, with any revisions being approved by the ANMC and certified by the City Council. Any revised versions will be published on the noise management section of Wellington Airport's website.

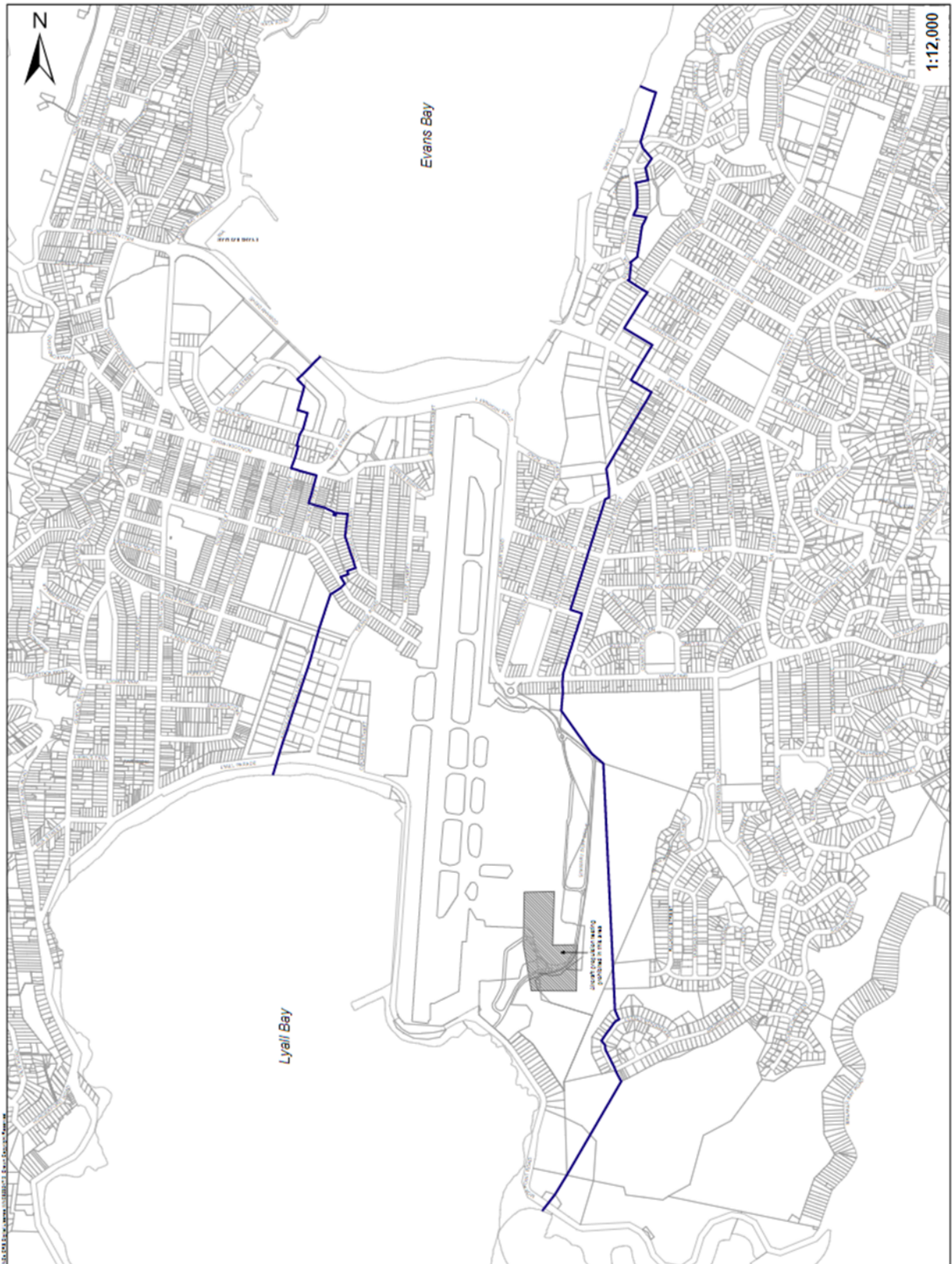
The ANMC is the body primarily responsible for the ANMP. However, the day-to-day upkeep of the ANMP is delegated to the Airport Planning Manager at Wellington Airport. The Airport Planning Manager shall be responsible for ensuring the ANMP is kept up to date with decisions of the ANMC, changes in legislation, standards etc. Accumulated changes shall be disseminated quarterly to all members of the ANMP, and recorded in the changes register, held in the Master Copy of the ANMP. The Master Copy shall be held with the Airport Planning Manager.

Any changes to the Airport Designations that necessitate major changes to the ANMP may constitute grounds for a complete review and restructure of the ANMP.

A thorough review of the ANMP including all changes made shall be carried out once every 5 years. The purpose of this review will be to determine the effectiveness of the ANMP in achieving the objective of the ANMP and the requirements of Wellington Airport designations. The review should also consider whether the cumulative effect of incremental changes is resulting in a significant deviation from the ANMP's core purpose – and if that is determined to be the case, make the necessary changes to the ANMP as part of the review.

WIAL shall engage an independent person to undertake a five yearly review of the ANMP. This review process shall be overseen and managed by the ANMC, in conjunction with the Airport Planning Manager.

Appendix A Air Noise Boundary



Appendix B Engine Testing Locations



DRAFT

Appendix C East Side Area Compliance Limit



Figure 4: East Side Area Compliance Line.

Appendix D Airport Noise Management Committee Terms of Reference and Dispute Resolution Procedures

Terms of Reference

Purpose

The purpose of the ANMC is establish a partnership between the airport, the community and other stakeholders for issues related to noise at Wellington Airport.

The ongoing maintenance and functioning of the ANMC will be achieved at Wellington Airport's expense.

Membership and Membership Roles

The membership of the ANMC will be structured as follows:

- One independent chair
- Four Community representatives including (as mapped in **Error! Reference source not found.**):
 - One representative from within the ANB east (where possible);
 - One representative from within the ANB west (where possible); and
 - Two representatives from within the wider airport community (the Eastern Ward).
- One City Council representative
- One Airways representative
- Two Airline Operators, comprising:
 - One representative from the Board of Airline Representative New Zealand; and,
 - One local non-BARNZ Airline Operator representative
- At least one WIAL representative



Figure 5: Air Noise Monitoring Terminal Locations.

- ANB east
- ANB west
- Wider airport community (the Eastern Ward)

The role of the members are defined as follows:

Chairperson	Wellington Airport will appoint an independent chair for the ANMC in consultation with the City Council.
Community Representatives	<p>Wellington International Airport is located within close proximity to existing residential, commercial and industrial development. The operation and growth of Wellington International Airport has the potential to affect the amenity of the community who live and work in those these areas.</p> <p>Conversely, residential development in the surrounding areas has the potential to generate reverse sensitivity effects on the operation of Wellington International Airport, which is a regionally significant asset.</p> <p>Given the above, the community representatives are tasked with:</p> <ul style="list-style-type: none">• Presenting the views of the local residents and community (including neighbouring properties and special interest groups);• Ensuring resident and community views have a direct route into the noise management process; and• Promoting communication and understanding between the residents / community and Wellington Airport and airport users and providing regular feedback on the deliberations of the ANMC.
Wellington City Council	<p>The City Council is the territorial authority within whose jurisdiction Wellington International Airport is located. The City Council has a responsibility to ensure that all activities undertaken within the City, including at Wellington International Airport, are undertaken in accordance with the requirements established in the District Plan. Wellington Airport is also required to provide any amended versions of the ANMP to City Council (as the applicable regulatory body for the management of noise and amenity effects) for certification prior to them being implemented.</p> <p>It should also be noted that the City Council is a partial shareholder in Wellington Airport. However, its involvement in the ANMC is with regard to its regulatory function under the RMA. The expertise of the City Council's representative on the ANMC should suitably reflect this aspect of the City Council's functions.</p>
Airways	Airways Corporation of New Zealand (Airways) is responsible for managing all domestic and international air traffic operating within New Zealand's airspace. Airways operate the Air Traffic Control at Wellington International Airport and is responsible for directing air traffic on the runway, in manoeuvring areas and in the airspace around the airport.
Airlines Operators	Representatives from BARNZ and non-BARNZ airline operators are parties to the ANMC as they represent the airport users who are responsible for the noise generating activities at Wellington

International Airport. As such, their involvement in the ANMC is essential to managing noise issues at Wellington International Airport into the future.

WIAL

WIAL is the owner and operator of Wellington International Airport and is responsible for ensuring operations and aircraft movements at the airport comply with requirements of its designation and any CAA requirements. In particular, WIAL is responsible for the development and implementation of the ANMP and for all subsequent amendments.

While WIAL acknowledges it has responsibility for managing noise at Wellington International Airport, other stakeholders have a role in ensuring the ANMP is workable and commercially viable, i.e. airlines.

WIAL also has a responsibility under section 16 of the RMA to adopt the best practicable options to ensure that the emission of noise from Wellington International Airport does not exceed a reasonable level.

Meeting Procedures

While it is expected that the ANMC will develop its own processes for the facilitation of meetings over time, the following procedures are expected to be followed:

1. **Chairperson** – WIAL, in consultation with the City Council, will appoint an independent chair to convene and facilitate all meetings of the ANMC.
2. **Notice of Meeting** – WIAL will arrange for a notice of meeting, together with any relevant information, to be sent to all ANMC representatives at least 3 working days prior to each meeting. The notice of meeting will set out the time and place of the meeting and the nature of the business to be discussed. Representatives may advise WIAL of items to be included in the notice of meeting. For each meeting, WIAL will report on:
 - Noise Enquiries
 - Noise Monitor Reports (LdN compliance, aircraft operations analysis and NMT calibration analysis)
 - Update on Airport Noise Treatment Progress (Quieter Homes)
 - Anything else that WIAL considers relevant.
3. **Method of Holding Meeting** – A meeting will be held by a number of representatives, who constitute a Quorum, being assembled together at the place, date and time appointed for a meeting.
4. **Quorum** – A quorum exists if there are at least four members present, including one of the community representatives, the Council representative, a representative from BARNZ and at least one WIAL representative. No business may be transacted at a meeting of the representatives if a Quorum is not present.
5. **Members may act by Representative** – A member of the ANMC may appoint a substitute to attend one or more meetings of the ANMC provided this is communicated to the Chairperson in advance of the meeting.
6. **Minutes** – WIAL will ensure that accurate minutes of all ANMC meetings are produced and circulated to all representatives within 10 working days of each meeting occurring.

ANMC Functioning

The ANMC shall meet up to 4 times per annum. The meeting schedule and need for additional meetings per year will be decided at the discretion of the ANMC.

WIAL will provide a venue and secretarial and support services to the ANMC at its own expense.

WIAL will provide any necessary data and technical information on aircraft movements and any update of the noise complaint register as set out in Section 6 of this ANMP to all ANMC representatives in advance of each meeting.

Community Representatives

The community representatives shall be appointed for a term of three years, to align with the Local Government election cycle. At the end of each term, new community representatives will be selected using a public election procedure as follows:

1. A call will be made for nominations for representatives from the three mapped areas shown in **Error! Reference source not found.** The call for nominations will be made via the following mediums:
 - a. A public notice in the Dominion Post;
 - b. A letter to all current Resident Association's in the Airports neighbourhood;
 - c. A public notice on the Wellington Airport website; and
 - d. A letter to all properties within the ANB.
2. All nomination forms and election procedures are to be set out in full on the City Council's website or can be provided by emailing noise@wcc.govt.nz.
3. Where more than one nomination is received for each of the defined community areas, it will be at the discretion of the Chairperson to determine whether a City Council returning officer needs to be appointed (in accordance with the City Council's electoral policy), or whether the matter can be resolved by allowing all nominees onto the ANMC. The Chairperson must take into account the efficient functioning of the ANMC when exercising their discretion.

The community representatives are required to attend the scheduled ANMC meetings. Reasonable costs (including a stipend) associated with members of the community participating on the ANMC are paid to the community representatives by WIAL⁵⁰. After three consecutive absences, a community representative is considered to have resigned from the ANMC, unless the ANMC considers extenuating circumstances apply to their absences.

ANMC Dispute Resolution Procedure

WIAL is committed to a process whereby differences between the parties represented on the ANMC are resolved within the Committee through the provision of information, analysis, consultation and the development of a consensus.

WIAL recognises however that there may be occasions where a consensus does not emerge in an area where a decision is required. In the first instance the difference will be noted, but, if in the view of the Committee it is essential to resolve the difference the following will apply:

1. WIAL accepts that it is the prerogative of the Chairperson of the ANMC to determine that a point of difference exists and that the Chairperson may endeavour to resolve the issue within the ANMC, with the Chairperson acting as mediator.
2. If the Chairperson determines the issue is of significance and the point of difference within the ANMC cannot be reasonably resolved, the Chairperson may appoint an independent mediator at the cost of WIAL.
3. To facilitate mediation, WIAL will provide the Chairperson (at WIAL's cost) with whatever information and advice the Chairperson considers reasonably necessary. This includes obtaining a legal opinion

⁵⁰ Condition 34 of WIAL 4 Designation

on the issue (or aspects of it). Any information provided to the independent mediator and legal advice obtained will also be made available to the members of the ANMC and WIAL.

4. If despite best efforts (including an independent mediator if the Chairperson so chooses) a consensus cannot be reached within the ANMC, the Chairperson will make any decisions necessary to resolve the dispute.

DRAFT

Appendix E Airport Wide Construction Management Plan

NOTE: For Consultation/Feedback purposes:
Appendix E is currently under revision. Available on request from 23/11/22.

DRAFT