

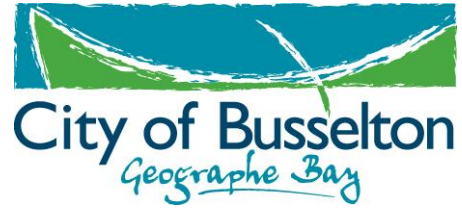
Southern Drive, Busselton, Western Australia

Telephone: (08) 9781 0444 Facsimile: (08) 9752 4958

Email: [city@busselton.wa.gov.au](mailto:city@busselton.wa.gov.au)

Web: [www.busselton.wa.gov.au](http://www.busselton.wa.gov.au)

All communications to: The Chief Executive Officer, Locked Bag 1 BUSSELTON  
WA 6280



---

**BUSSELTON-MARGARET RIVER  
AIRPORT  
NOISE MANAGEMENT PLAN  
Final – January 2022**

---

---

## INDEX

<b>INDEX .....</b>	<b>2</b>
<b>INTRODUCTION .....</b>	<b>6</b>
<b>AIRPORT OPERATIONAL ACTIVITIES.....</b>	<b>11</b>
NOISE ABATEMENT PROCEDURES.....	11
FLIGHT PATHS .....	11
STANDARD HOURS OF OPERATION .....	12
FLIGHT TRAINING GUIDELINES .....	13
FLY NEIGHBOURLY AGREEMENT.....	16
<b>APPROVAL FOR SPECIAL EVENTS .....</b>	<b>17</b>
ASSESSMENT OF OTHER APPLICATIONS .....	17
<b>NOISE COMPLAINTS.....</b>	<b>19</b>
<b>NOISE ASSESSMENT AND MONITORING .....</b>	<b>21</b>
NOISE MONITORING .....	21
NOISE MEASUREMENT .....	21
WHAT ARE 'NUMBER ABOVE' NOISE CONTOURS? .....	22
<b>NOISE AMELIORATION.....</b>	<b>24</b>
NOISE REDUCTION AND AMELIORATION MEASURES .....	24
NOISE REDUCTION PARAMETERS .....	24
NOISE AMELIORATION AS A NOISE REDUCTION TECHNIQUE .....	25
PROCESS FOR AMELIORATION ASSESSMENT .....	26
<b>COMMUNICATION AND CONSULTATION.....</b>	<b>29</b>
<b>IMPLEMENTATION AND REVIEW .....</b>	<b>30</b>
COMPLIANCE FRAMEWORK.....	31
REVIEW PROCESS.....	32

## Definitions

**Accredited Environmental Noise Personnel** - a person authorised in accordance with Sections 87 and 88 of the *Environmental Protection Act 1986*.

**AGL (Above Ground Level)** - a height reference to distance above ground level.

**ANEC-** These are scenario contours and are used to produce 'what if' contours, for example, in the process of examining flight path options around an airport.

**ANEF -** These are the official forecasts of future noise exposure patterns around an airport and they constitute the contours on which land use planning authorities base their controls.

**Australian Noise Exposure Forecast (ANEF)** - a prediction of the cumulative exposure to aircraft noise which communities near an airport are likely to experience in a specified future time (usually 10 – 20 years) and over a specified duration (usually one year). The results are depicted in the form of contours linking areas that have the same noise exposure.

**Charter (Closed)** - Operation, with fixed schedule to and from fixed terminals, in which the purchase of tickets is not available to any member of the public but specifically to an individual or organisation.

**Charter (Open)** - Operation, with fixed schedule to and from fixed terminals, in which the purchase of tickets is available to any member of the public through either a agent or directly on-line.

**dB L<sub>A SLOW</sub>** - the A-weighting filter covers the full audio range - 20 Hz to 20 kHz and the shape is similar to the response of the human ear at the lower levels, SLOW refers to the time weighting applied.

**Flight Training** – instruction received from a flight training school or qualified flight training instructor in an aircraft or flight simulator. Training only applies to student pilots or unqualified pilots. Flight training definition does not include recurrent training or licence renewal training, ground training or a demonstration flight.

**Fly Neighbourly Agreement (FNA)** - a voluntary code of practice included in the Noise Management Plan to be actively promoted and facilitated by the City

**Licence Renewal Training** - training performed by a qualified pilot, whereby specific operations are required to be completed to maintain pilot licence as current (example; Take off/Landings, VFR operations) as defined under CAR 1988 Volume 2 – Part 5, Division 8.

**MTOW** – Maximum Take Off Weight

**Noise Abatement Zones** - areas of land with proximity to the airport with existing or planned noise sensitive land uses over which aircraft activity is to be minimised.

**Noise Contours (N-Contour or Nxx)** - the noise contours on a map indicate the number of aircraft noise events louder than the specified dB(A) level which would occur on the average day during the period covered (example - an N65 contour map would depict the number of events that would exceed 65dB(A) on the average day).

**Noise Sensitive Location** - a land-use with an identified sensitivity to noise eg: residence, hospital.

**Regular** – occurring at uniform (even / constant) intervals

**Regular Passenger Transport (RPT)** – commercial airline services operating to a regular schedule, to and from fixed terminals, where the purchase of tickets is available to any member of the public.

**Special Control Areas** - areas of land with proximity to the airport where noise sensitive land uses can be restricted.

Table 1 – Document Management Information

<b>Action</b>	<b>Date</b>	<b>Organisation</b>
NMP revision – Final	August 2022	City of Busselton
NMP revision - Draft	January 2022	City of Busselton
NMP revision – Version 2	January 2019	City of Busselton
NMP revision – Version 1	May 2018	City of Busselton
NMP revision	March 2017	City of Busselton
NMP revision	18 February 2016	City of Busselton
NMP (January 2015) Ministerial Approval	7 July 2015	Minister for Environment; Heritage
NMP Final revision	22 December 2014	City of Busselton
NMP resubmission	10 March 2014	City of Busselton
NMP revision (First review period)	7 November 2013	City of Busselton
Final Ministerial Approval	22 June 2012	Minister for the Environment
Final proponent revision	3 February 2012	City of Busselton
EPA Board consideration	19 January 2012	EPA Board
Public Consultation	4 weeks advertising	Shire of Busselton
Submission to EPA	1 February 2011	Environmental Protection Authority
Council review and adoption	15 December 2010	Council
Busselton Airport Advisory Committee recommendations	7 December 2010	Airport Advisory Committee
Shire of Busselton review and recommendations	October-December 2010	CEO – Mike Archer
Busselton Airport Advisory Committee revisions and updates	August/September 2010	Airport Advisory Committee (previously Advisory Group)

<p>Busselton Airport Advisory Group development of draft plan</p> <p>The draft Noise Management Plan was developed by the Airport Advisory Group, consisting of:</p> <p>Cr Tom Tuffin – Shire of Busselton  Cr Jackie Emery – Shire of Busselton  Cr David Binks – Shire of Busselton  Mr Ray McMillan – Busselton Chamber of Commerce  Ms Natalie Venosi – Geographe Bay Tourism Association  Mr Andrew Svalbe – Community representative  Mr Peter Stark – Community Representative  Mr Ross Beatty / Mr Geoff McGlasson – Busselton Aero Club  Mr John McCallum / Mr Brian Rulyancich – Dunsborough-Yallingup Chamber of Commerce  Two representatives (with one deputy) of the Airport Residents' Group</p>	<p>August 2009 to July 2010</p>	<p>Airport Advisory Group (later Advisory Committee)</p>
<p>Draft Noise Management Report developed by Strategen</p>	<p>April 2009</p>	<p>Strategen Consultants</p>

---

## INTRODUCTION

The City of Busselton, as the owner and operator of the Busselton-Margaret River Airport, seeks to operate the airport to its full potential for the benefit of tourism, export producers and freight, aviation business and economic development of the South West region. In doing so, the City recognises that noise can and does affect members of its community and hence this noise management plan outlines the strategies and measures to minimise noise impacts for the community.

The main objectives of the Noise Management Plan are to;

- identify and implement controls and procedures for the effective management of aircraft noise and the reduction of aircraft noise impacts;
- provide clear and specific guidelines for airport users as to their responsibilities and obligations with regard to noise management;
- procedures for monitoring and ongoing review of the plan;
- outline noise assessment and mitigation procedures; and
- provide the general community with clear and transparent information and guidelines as to the noise management controls and procedures to be employed in respect of aircraft noise in the vicinity of the Busselton-Margaret River Airport.

### *Understanding Noise*

Sounds are vibrations through the air or other mediums that are received and 'heard' by a person or animal. Whereas 'noise' can be simply defined as unwanted or unpleasant sound.

Sound is measured in decibels (dB) and is represented on a non-linear (logarithmic) scale. This means that a person is unlikely to notice a change in 1 or 2 dB while a 10 dB change in noise levels reflects a doubling or halving of loudness.

The human ear is less sensitive to low audio frequencies so instrument measured sound levels are typically 'A-weighted' to mimic the response of the human ear to sound. This is indicated by adding (A) to the dB unit and expressed as dB(A).

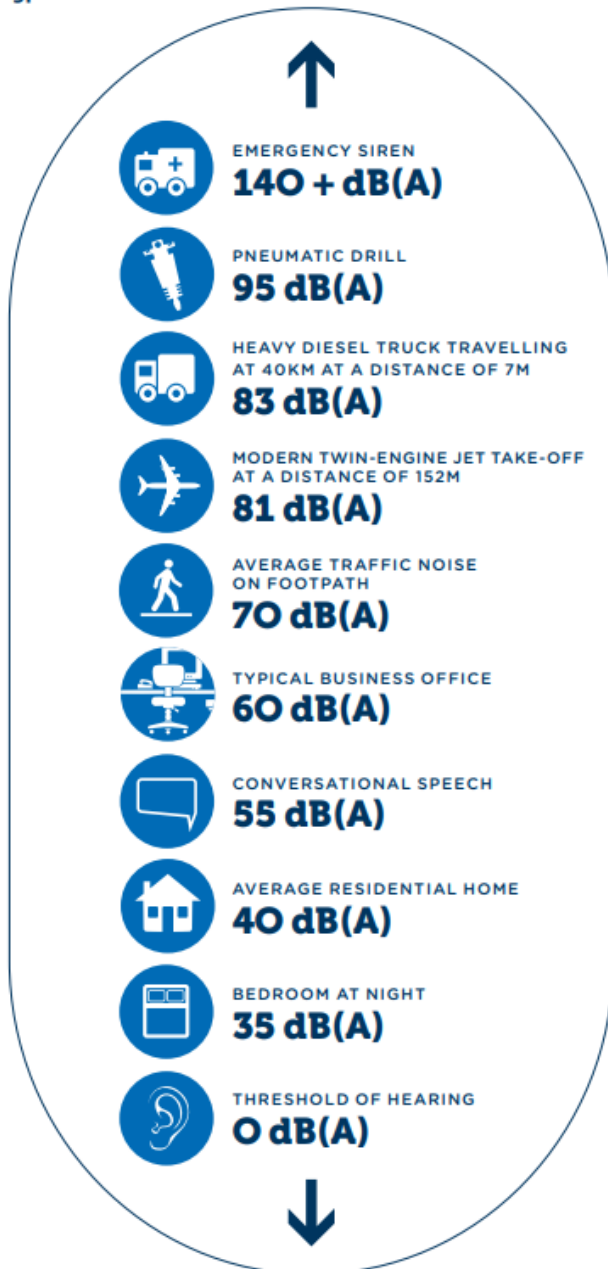
The majority of aircraft noise is generated by the engines and depends on a range of factors including:

- aircraft size and weight,
- number and type of engines,
- atmospheric conditions;

- thrust setting,
- speed, and
- altitude and distance.

Some examples of typical sound levels are listed below:

Typical sound levels



## *Who is responsible for aircraft noise management?*

The City of Busselton, through the NMP, recognises the International Civil Aviation Organisation's (ICAO) internationally accepted and employed principle of a balanced approach to aircraft management. This consists of identifying the noise impacts at an airport and then analysing the various measures available to reduce noise and noise impacts through four principal elements, being:

- Reduction of noise source;
- Land use planning and management;
- Noise abatement operational procedures; and
- Operating restrictions at airports.

To achieve a balanced approach, a range of organisations have roles and responsibilities in managing aircraft noise as listed below:

Organisation	Roles and Responsibilities
International Civil Aviation Organisation (ICAO)	Establishes noise certification standards for new aircraft Provides guidance on noise management strategy
Civil Aviation Safety Authority (CASA)	Independent statutory authority with responsibility for regulation of civil aviation operations in Australia Provides overriding consideration to air safety Responsible for airspace regulation through the Office of Airspace Regulation
Department of Infrastructure, Transport, Regional Development and Communications	Advises the Federal Government on the policy and regulatory framework for Australian airports and the aviation industry Provides policy advice to the Minister on the management of aircraft noise



	<p>Provides regulatory oversight of the Air Navigation (Aircraft Noise) Regulations 1984 as they apply to aircraft which do not meet Australian aircraft noise standards</p>
Airservices Australia	<p>Provides Air Traffic Control (ATC) services</p> <p>Manages and maintains aircraft navigation, surveillance, and noise monitoring infrastructure</p> <p>Establishes flight paths at Australian Major City Airports</p> <p>Manages noise complaints and enquiries through the Noise Complaints and Information Service</p> <p>Provides information on aircraft movements, runway and flight path usage and noise impacts using a range of noise descriptors</p> <p>Reviews and endorses Major City Airport ANEF charts for technical accuracy</p>
Airlines and aircraft operators	<p>Operate and maintain aircraft that meet the ICAO noise certification requirements</p> <p>Implement noise abatement procedures principles for flight operations</p>
Aircraft Noise Ombudsman (ANO)	<p>Oversees the handling of aircraft noise enquiries and complaints by Airservices</p> <p>Conducts independent reviews of noise complaint handling</p> <p>Makes recommendations for improvements and changes where necessary and feasible</p>
State and Local Government	<p>State Government develop land use planning frameworks to prevent developments that are inappropriate having regard to aircraft noise</p> <p>Local Governments implement State Government land use planning frameworks</p> <p>Local Governments own &amp; operate regional airports</p>

City of Busselton	<p>Manages operations at the airport</p> <p>Develops and maintains infrastructure to support aircraft operations</p> <p>Publishes a Master Plan with associated ANEF</p> <p>Manages aircraft noise associated with the BMRA through BMRA Noise Management Plan in accordance with MS 1088</p> <p>Manages commercial opportunities, including air services, general aviation, retail, commercial and industrial at the BMRA</p>
-------------------	--

The City liaises with CASA and Airservices to effectively manage aircraft noise impacts associated with the BMRA. This includes the design and publication of flight paths, Master Planning and preparation of ANEF/N-contours, handling of noise complaints and implementation of this NMP. However, it is important to note that the City only has control in the management of ground based aircraft noise, with the CASA and Airservices responsible for the administration and regulation of Australian airspace.

---

# AIRPORT OPERATIONAL ACTIVITIES

The BMRA has developed mechanisms for managing aircraft noise including but not limited to:

- Noise Abatement Procedures
- Flight Paths
- Standard Hours of Operation
- Flight Training Guidelines
- Fly Neighbourly Agreement

## Noise Abatement Procedures

Noise Abatement Zones identify areas that include existing and future planned residential development in close proximity to the airport. These are shown in figure 1.

As far as practicable, in accordance with air safety standards, operators shall:

- minimise the over flight at less than 1500 feet (AGL) of areas identified as noise abatement zones.

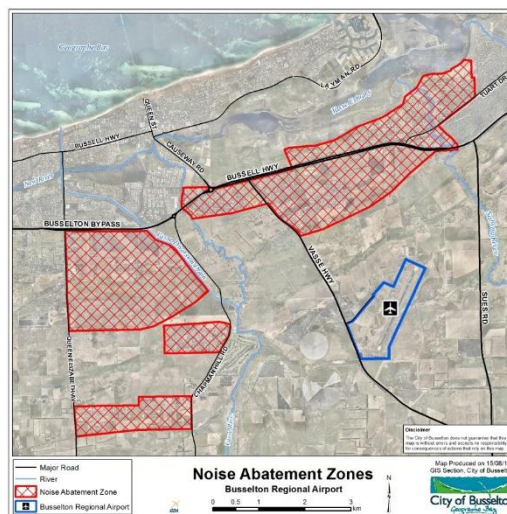


Figure 1 – Existing and Planned residential development with proximity to the Busselton-Margaret River Airport

## Flight Paths

As far as practicable, in accordance with applicable regulatory requirements, guidance, procedures and limitations, operators shall:

1. maximise the use of flight paths over coastal waters and non-residential areas, rural land and State forest;

2. minimise the over flight of residential areas, including rural residences and other noise-sensitive premises, particularly at less than 1500 feet (AGL);
3. utilise descent profiles with low-power and low-noise operations.

## Standard Hours of Operation

The following table has been established to advise airport users of those operations that need City approval and to specify overall limits on operations to limit impacts for the community.

Table 2 – Operational Limitations and Approved Parameters

<u>Operator / Aircraft Type</u>	<u>Standard Hours of Operation</u>	<u>Conditions</u>
Emergency Services	<b>UNRESTRICTED</b>	Emergency situations and normal flight patterns <ul style="list-style-type: none"> <li>• training flights require approval under the Flight Training Guidelines</li> </ul>
Light Aviation/ General Aviation	<b>RESTRICTED</b> <b>0600hrs – 2200hrs</b>	Maximum noise level of 85dB (A)* Flight Training approval required (only available for single engine, non-turbine aircraft and flight training conditions apply) Aircraft above 5,700kgs MTOW – City approval required
Open, Closed Charters, RPT/Commercial Operators	<b>RESTRICTED**</b> <b>0600hrs – 0000 hrs</b>  <b>**Five flights per week approved between 0000 - 0600hrs.</b>	Maximum noise level of 85dB (A)* City approval required
* The Aircraft Noise levels identified in this table are maximum noise levels recorded at any residential or other noise-sensitive location when determined as an LA Slow value at any point within 15m of the identified building. Noise levels regularly exceeding this may initiate noise mitigation procedures (Chapter 6.2.3)		

Any application that does not conform to the standard hours of operation or conditions set out in this table is considered a Special Event. Assessment of Special Events will be undertaken using the procedures defined in Section 3.2.4

- Emergency Services include:
  - Royal Flying Doctor Service;
  - Sea Search and Rescue;
  - Department of Fire and Emergency Services (DFES) and Department of Biodiversity, Conservation and Attractions (DBCA) aircraft (Firefighting/rescue fixed wing & rotary);
  - Police Airwing;
  - W.A Surf Life Saving (Westpac rescue Helicopter)
  - Military aircraft (no flight training approval required).

## Flight Training Guidelines

These Guidelines are intended to provide consistency in considering applications for aircraft pilot training for **flight training operators based** at the Busselton-Margaret River Airport. The intent of the Guidelines are to provide guidance in relation to pilot training and pilot training schools based at the Busselton-Margaret River Airport. The specific aims of the Guidelines are as follows:

- To minimise impacts on City of Busselton residents from flight training operations based at the Busselton-Margaret River Airport;
- To establish guidelines for flight training which relate to types of aircraft, frequency of flights, hours/days of operation; and
- To establish a standardised procedure for assessment and approval of flight training proposals.

The City of Busselton will use these guidelines in relation to proposals to establish pilot training and pilot training schools based at the Busselton-Margaret River Airport.

### Application for a Permit

The City of Busselton requires an application for a permit to be lodged for proposals for pilot training and pilot training schools at the Busselton-Margaret River Airport to be considered.

Applications for a permit will only be considered for flight training from Instructors based/operating from the location of the Busselton-Margaret River Airport. The Proponent will need to include information in relation to the following:

- Name of individual flying instructor/ Flight Training School;

- Number, type (model/description) and weights of aircraft to be used for flight training;
- Noise characteristics of aircraft to be used for flight training;
- Provide a Flight Training Plan outlining their training programs including maps of flight training areas/flight paths and circuits;
- Estimated number of trainee pilots;
- Airfield emergency response plan;
- Professional/commercial background of operator;

A permit to conduct Flight Training at the Busselton-Margaret River Airport may be issued for a period of 12 months and at the finalisation of this period a further permit may be granted at the discretion of the City.

In addition, the City of Busselton will require the proponent to sign up the NMP, including the Fly Neighbourly Agreement.

### **Permit Provisions**

The Guidelines will apply to the following aircraft classifications, frequency, times and type of use;

#### **1. Aircraft Type**

- Single engine, non-turbine aircraft only.

#### **2. Times of Operation**

The hours of operation for flight training will be as follows:

- 8am to last light on Monday – Friday;
- 9am to 5pm on Saturdays, Sundays and public holidays.
- There is to be no Flight Training on Christmas Day, Boxing Day or Good Friday.

#### **3. Flight Training**

- A cumulative total of 35 hours per week per instructor (inclusive of circuit training and NDB training), where an average of 25 hours per week per instructor is not exceeded over the course of 12 months
- No more than 6 'continuous' circuits in any one flight training session
- All aircraft fly a minimum of 640 feet (AGL) over wetlands and estuaries of the Vasse and Wonnerup areas to avoid bird strike and disturbance of waterbird habitat.

#### **4. Emergency response**

Applicants proposing to operate pilot training at Busselton-Margaret River Airport shall be aware of the Airport Emergency Plan at the airport. Applicants are to provide their Emergency Response Plan.

## **5. Noise**

Flight training aircraft are subject to the same noise levels detailed in the Standard Hours of Operation. Conditions of approval will reflect consideration of the estimated noise and frequency of flight.

## **6. Fly Neighbourly Agreement**

All applicants will be required to abide by the FNA.

## **7. Revocation of Approval**

Any permit issued by the City of Busselton will contain provisions enabling the City to revoke that approval in the event of non-compliance with any of the conditions contained therein.

## **8. Exemptions for Flight Training**

Flight training exemptions will be provided for the Emergency Services however an approval is still required to be applied for. The exemption will apply to the following Emergency Services;

- Royal Flying Doctor Service
- Sea Search and Rescue
- DFES / DBCA
- Police Airwing
- Other Emergency Services providers as required from time to time.

RAAF and Military Services are exempt from applying for flight training permits however are required to provide prior notice to the City of Busselton.

## **9. Licence Renewal Training**

Licence renewal training requires written permission, approved by the CEO of the City of Busselton and will only be issued to airline operators that utilise the Busselton-Margaret River Airport on a frequent basis for either FIFO operations or RPT services. A permit will only be issued once a FNA has been agreed to between the potential operator and the City of Busselton.

## **Fly Neighbourly Agreement**

This Fly Neighbourly Agreement (FNA) is a code of practice to be observed by users of the Busselton-Margaret River Airport to assist with the minimisation of noise nuisance experienced by the Airport's neighbours. See Appendix B for the BMRA Fly Neighbourly Agreement.



## APPROVAL FOR SPECIAL EVENTS

Any operator seeking to utilise the BMRA for an event or operation that does not comply with the specifications in section ‘Standard Hours of Operation’ can apply to the City of Busselton setting out the details of the proposal. The City Chief Executive Officer (or approved delegate) is authorised to determine applications for up to and including twelve (12) Special Events that are approved for a single event or circumstance, where the operation is due to the following circumstances;

- Inclement weather
- Unserviceable aircraft
- One-off events

### Assessment of other applications

An application for an Other Special Event that is not a single event or circumstance is to be assessed under a broader Consultation Process outlined in Table 3.

Table 3 – Consultation Process for Special Events

Receipt of application for Other Special Events that is not a single event or circumstance that does not comply with the Standards Established Standard Hours of Operaiton;
Referral to the Airport Advisory Committee for recommendation to Council; <ul style="list-style-type: none"> <li>- refusal to proceed;</li> <li>- alternative proposal; or</li> <li>- approval to proceed.</li> </ul>
Consideration by Council for approval to progress with the application <ul style="list-style-type: none"> <li>- refusal to proceed; or</li> <li>- approval to proceed.</li> </ul>
If an approval is sought for extension to the application: <ul style="list-style-type: none"> <li>• Evaluation of the initial period, including: <ul style="list-style-type: none"> <li>- public feedback;</li> <li>- Airport Advisory Committee consideration</li> </ul> </li> </ul>
Council consideration after evaluation of initial period, resulting in: <ul style="list-style-type: none"> <li>- refusal; or</li> <li>- approval, subject to conditions as required</li> </ul>

**CONDITIONS:** In limited circumstances an ongoing Special Event may be approved, subject to a comprehensive assessment of the potential amenity impact of the proposal, in accordance with the noise amelioration requirements of this plan.

Any approval provided shall include:

- Noise generation limitation;
- Hours within which the operations cannot occur;
- Noise reduction requirements;
- Any other conditions appropriate to the specific application.

---

## NOISE COMPLAINTS

Airservices Australia manages enquiries and complaints regarding aircraft noise throughout Australia through the Noise Complaints and Information Service (NCIS).

Airservices role involves:

- ensuring that flight departures and arrivals are designed to minimise noise impacts
- providing information about aircraft noise
- monitoring aircraft noise around major airports
- providing a national Noise Complaints and Information Service.
- All aircraft noise complaints should be lodged with Airservices Australia

The City recommends that all noise complaints are lodged with Airservices Australia. If you would like to make a complaint, you should contact Airservices by:

- completing the online form available at: [airservicesaustralia.com](https://airservicesaustralia.com) (aircraft noise/making a complaint),
- contacting the Airservices NCIS hotline on 1800 802 584, 9am – 5pm EST,
- emailing [ncis@airservicesaustralia.com](mailto:ncis@airservicesaustralia.com), or
- writing to Noise Complaints and Information Service GPO Box 367, Canberra ACT 2601.

For more information visit: [airservicesaustralia.com](https://airservicesaustralia.com)

If you feel your issue has not been effectively addressed, or you believe you have not been provided with adequate information, you may also lodge a complaint with the Aircraft Noise Ombudsman (ANO) by:

- emailing [ano@ano.gov.au](mailto:ano@ano.gov.au),
- completing the online form available at [ano.gov.au](https://ano.gov.au) (making a complaint/online complaint form),
- contacting the ANO on 1800 266 040, or
- writing to the ANO GPO Box 1985, Canberra ACT 2601.

For more information visit: [ano.gov.au](https://ano.gov.au)

If you wish to make a noise complaint to the City of Busselton associated with the Busselton-Margaret River Airport, it should be submitted to the Chief Executive Officer (or CEO's nominated complaints officer) of the City. Complaints can be lodged verbally, via email or in writing and will need to include:

- The complainants name;
- The location at which the noise nuisance occurred;
- The date(s) and time(s) on which the noise nuisance occurred;
- Any details of the aircraft that may have been observed;
- Any other information that will enable the complaint to be properly investigated.

Complaints will be acknowledged in writing and complainants will receive a response once the complaint has been investigated.

The City will maintain records of complaints regarding aircraft noise impact and utilise this information in the ongoing review and implementation of the NMP.

---

# NOISE ASSESSMENT AND MONITORING

## Noise Monitoring

Noise monitoring will be used to assess compliance with the noise standards established in the NMP. Noise monitoring may be carried out both on Busselton-Margaret River Airport land and the surrounding areas. Where a representative sample of data has been collected noise monitoring results will be used for:

Table 4 – Noise Monitoring Schedule

Purpose	When	Where
Noise monitoring	Response to requests or complaints or significant change in operations	At affected noise-sensitive premises (outdoors and / or indoors)
Land use planning	Assessment of proposal	Relevant subject site
Events or one-off occurrences	During the event or at specified time intervals.	Referenced locations (eg runway ends) or at residential properties.

All noise monitoring and assessment will be performed by accredited Environmental noise personnel and will involve collecting samples of representative data. The results of the noise monitoring will also be used to verify compliance with the NMP and considered when reviewing the NMP.

## Noise Measurement

For land use planning around airports, Australia has adopted the Australian Noise Exposure Forecast (ANEF) system, which describes cumulative aircraft noise for an 'average annual day'. The ANEF system was developed on the basis of social survey data which aimed to correlate aircraft noise exposure with community reaction in residential areas. The ANEF system is useful for controlling new noise sensitive developments near airports. An Australian Noise Exposure Concept (ANEC) is a noise chart produced for a hypothetical future airport usage pattern. ANEC noise exposure contours are calculated using the same methods as the ANEF; however, they use indicative data on aircraft types, aircraft operations and flight paths. Australian Standard 2021:2015 contains advice on the acceptability of building sites based on ANEF zones. The acceptability criteria vary depending on the type of land use. An aircraft noise exposure level of less than 20 ANEF is considered acceptable for the building of new residential dwellings.

Building type	Forecast noise exposure level (ANEF)		
	Acceptable	Conditionally acceptable	Unacceptable
House, home, unit, flat, caravan park	Less than 20 ANEF	20 to 25 ANEF	Greater than 25 ANEF
Hotel, motel, hostel	Less than 25 ANEF	25 to 30 ANEF	Greater than 30 ANEF
School, university	Less than 20 ANEF	20 to 25 ANEF	Greater than 25 ANEF
Hospital, nursing home	Less than 20 ANEF	20 to 25 ANEF	Greater than 25 ANEF
Public building	Less than 20 ANEF	20 to 25 ANEF	Greater than 30 ANEF
Commercial building	Less than 25 ANEF	25 to 30 ANEF	Greater than 35 ANEF
Light industrial	Less than 30 ANEF	30 to 40 ANEF	Greater than 40 ANEF
Other industrial	Acceptable in all ANEF zones		

*Building site acceptability table based on ANEF zones (AS2021)*

## What are ‘Number Above’ noise contours?

Noise measures based on the intensity and frequency of individual aircraft noise events is an effective way of conveying information about aircraft noise impacts. These measures are often more easily interpreted compared to the ANEC/ANEF. While ‘Number Above’ data show the number of events that are predicted to exceed a certain noise level at a given location, they do not show the intensity of noise to be experienced at that location. ‘Number Above’ (NXX) measures indicate the average number of aircraft overflights per day exceeding a specified noise level (XX dBA). For example at the 5 event contour on the N70 map there would be expected to be on average 5 events per day that exceed 70 decibels. The ANEC and N65 and N75 contours are accessible on the [Community & Environment - Busselton Margaret River Airport](#) website.

The ANECs and N70 contours will be used by the City’s Strategic Planning Department in future land use planning and town planning scheme amendments to protect both the community and future amenity for noise sensitive land users.

Noise Modelling based on ANEF, N65, N70 and N75 contours has been undertaken by the City of Busselton and will continue to be utilised to provide direction for future land use planning considerations as the Busselton-Margaret River Airport develops.

This includes the identification of noise sensitive land areas and restricted land use areas which have and potentially result in the City of Busselton applying airport notifications on land titles.

Noise modelling (ANEFs and/or ANECs and N-contours) will be reviewed every five years or upon the following trigger points (which will be reviewed on an annual basis)

- Change in aircraft models used for RPT and freight operations from those assumed in the aircraft Modelling (B737 and A320);

- Increase of more than 20% from the aviation movement forecasts used in the current noise modelling at the time; or
- re-design of flight paths and DAPs.

---

# NOISE AMELIORATION

## Noise Reduction and Amelioration Measures

The ongoing implementation and enforcement of the NMP is intended to result in an airport operation that does not significantly impact on the amenity and lifestyle of residents in the vicinity of the Busselton-Margaret River Airport.

Based on the Australian Department of Infrastructure and Regional Development (including National Airports Safeguarding Framework Principles and Guidelines) and AirServices Australia information, the City of Busselton utilises the Australian Standard AS2021;2015 for the basis of its noise assessment and amelioration process. This is based on one of the objectives of the Standard being to provide guidance to local governments, and communities concerned with planning and building development on the siting and construction of new buildings against aircraft noise intrusion and on the acoustical acceptability of existing buildings located in the vicinity or near aerodromes.

Further, in adopting the Australian Standard AS2021;2015 the City will apply the definitions of ‘determination of Building site acceptability’ of “Acceptable”, “Conditionally Acceptable” and “Unacceptable”. Using the Standard, the ANEF, N-Contours and noise monitoring techniques, in certain circumstances where the level of impact may be proven to be excessive, the residence can be considered for noise amelioration.

## Noise Reduction Parameters

As a general guide, the following noise levels have been broadly established as:

- Acceptable - whereby under normal circumstances no noise reduction measures will be necessary;
- Conditionally Acceptable - whereby negotiations may be necessary in an attempt to reduce the number of events and the noise impact;
- Unacceptable - whereby consideration will be given as to how the noise impact may be reduced.

Table 5 – Guide to Noise Level Acceptability

Acceptable	Conditionally Acceptable	Unacceptable
<75dB(A)	75-85dB(A)	>85dB(A)



These criteria relate to noise sensitive receivers including residences, and do not relate to commercial and industrial receivers. Where a noise sensitive receiver is experiencing regular noise levels as set out in the Noise Amelioration Assessment table actions may be taken by the City of Busselton to implement further controls on any activity consistently generating this level of noise. Where a residence experiences noise levels that regularly exceed 85dB(A) the City of Busselton may restrict the ongoing use of any aircraft that generates such noise. Should operational noise reduction measures not prove successful, noise amelioration will be utilised.

## Noise Amelioration as a Noise Reduction Technique

One strategy that the Council will utilise in reducing the noise impact will be noise amelioration measures for specific residences at which such noise levels have been experienced. In assessing any residence as to whether it qualifies for noise amelioration, the City will follow the process below as defined in AS2021; 2015;

Table 6 – Noise Criterion for Amelioration

<b>Outdoor Noise Criterion</b>
<p>Noise Amelioration action is required where <math>L_{Amax}</math> regularly exceeds<sup>2</sup> –</p> <p>(1) 85dB(A); or</p> <p>(2) 80dB(A) for &gt; 6 events<sup>1</sup> per day; or</p> <p>(3) 75dB(A) for &gt; 12 events<sup>1</sup> per day.</p> <p>Notes:</p> <p>(1) Each aircraft noise event occurring between 7pm and 7am is to be counted as 4 events.</p> <p>(2) Regularly exceeds refers to events occurring at uniform (even / constant) intervals. Noise generated by Emergency Services Aircraft operating in emergency situations are not to be taken to count towards the monitored noise events for amelioration purposes.</p> <p>AND / OR</p> <p>Table 2.1 Building Site Acceptability based on ANEF Zones in AS2021:2015; where a house, home, unit, flat, caravan park falls in the 20-25 ANEF zone</p>

Table 7 – Target Levels for the Design of an Acoustic Insulation Package

<b>Building type and activity</b>	<b>Indoor design sound level dB(A)</b>
<i>Houses, home units, flats, caravan parks</i>	
Sleeping areas, dedicated lounges	50
Other habitable spaces	55
Bathrooms, toilets, laundries	60

## Process for Amelioration Assessment

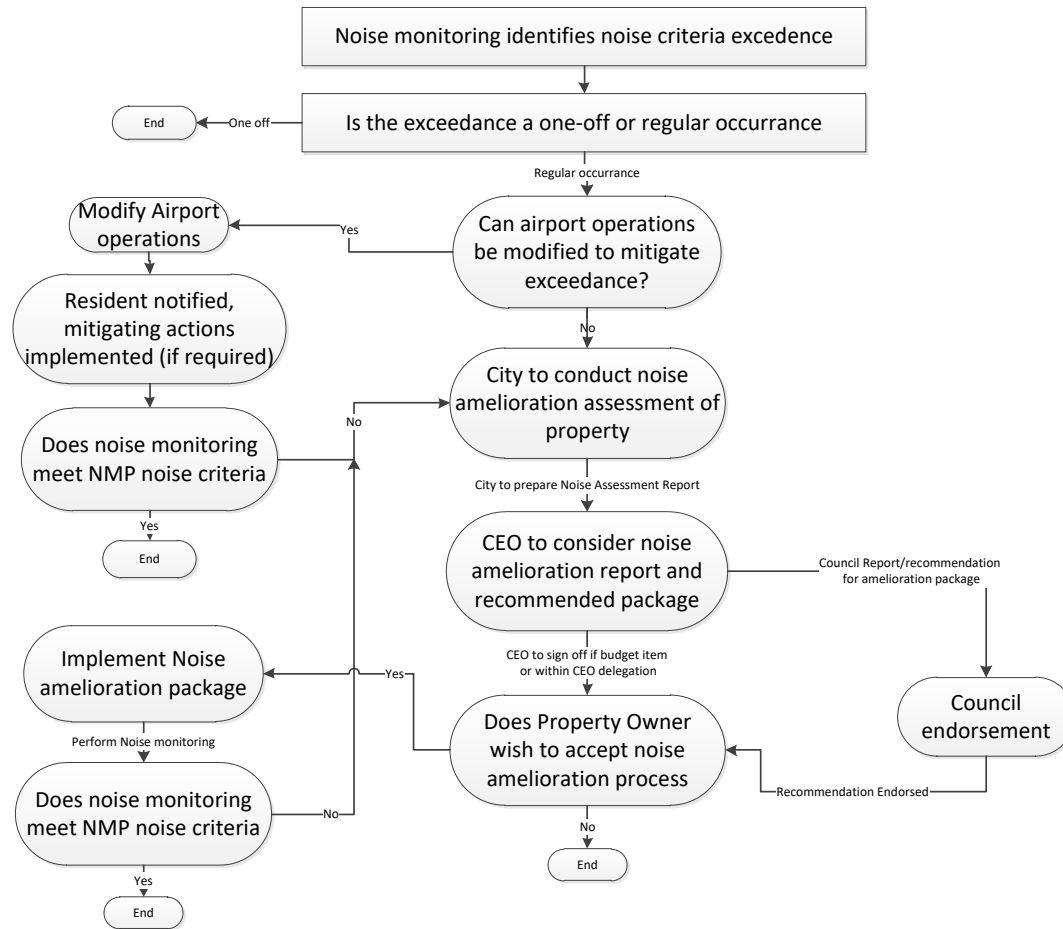
A key management action for the implementation of the NMP is to identify residences requiring noise amelioration assessment. This assessment will be undertaken in accordance with the process identified in Table 8 and process flow detailed in Table 9.

Table 9 – Amelioration Assessment Process

Action	Input / Output	Parties Involved
Identify Residential Property for assessment	<ol style="list-style-type: none"> <li>1. Request or complaint from property owner; or</li> <li>2. Noise Monitoring data identify noise level 'breach'</li> </ol>	Property owner City of Busselton
Desktop analysis of noise monitoring	<ol style="list-style-type: none"> <li>1. Determine if noise monitoring data exists or is required</li> <li>2. Conduct noise monitoring (if required)</li> <li>3. Compare noise monitoring to noise level criteria</li> </ol>	City of Busselton Property owner
Liaison with Property owner	Initial discussions with property owner regarding amelioration packages provided for in the NMP	City of Busselton Property owner
Acoustic assessment for amelioration design	Assessment of property for amelioration design packages in accordance with Australian Standard Indoor Design Sound Levels*	Acoustic Engineers Acoustic insulation specialists City of Busselton Property owner
Liaison with Property owner	Further discussion with property owner to confirm options on amelioration packages	City of Busselton Property owner
Report to CEO	Report on details of amelioration and officer recommendation including if Council consideration is required.	City of Busselton
Report to Council (if required)	Report to contain <ul style="list-style-type: none"> <li>- results of noise monitoring</li> <li>- Cost of possible amelioration packages</li> <li>- Results of consultation with private property owner</li> <li>- AAC and City Officers' Recommendation</li> </ul>	City of Busselton

Follow-up acoustic assessment	Noise monitoring to assess effectiveness of amelioration implementation	Accredited Noise Monitoring
-------------------------------	---	-----------------------------

Figure 3: Noise amelioration process flow.



---

## COMMUNICATION AND CONSULTATION

The City may utilise at various times any or all of the following communication and consultation initiatives:

- An advisory committee or similar established body to provide specific input to various proposals and to assist with stakeholder communication and consultation;
- Regularly update the City of Busselton's Busselton-Margaret River Airport website with airport operations information;
- Ensure that airport noise complaints procedures are advertised and available on the Busselton-Margaret River Airport website;
- Place all Council endorsed, related noise exposure contour maps on the Busselton-Margaret River Airport website and make available to the public by various other means (i.e. ANEF, ANEI, N-contours);
- Provide land use planning information in various formats along with the noise contour information;
- Utilise newspaper releases, radio updates, forums, community meetings and advisory committee meetings;
- Direct communication with interested members of the public (eg those living near the airport) with information pertaining to Airport operations.
- Noise amelioration Information Package.

---

## IMPLEMENTATION AND REVIEW

The Busselton-Margaret River Airport is required to implement this Noise Management Plan to ensure all operators utilising the airport are doing so in an approved manner.

Table 10 - The Management Structure consists of:

Council	<p>Sets high level direction for Airport development and management</p> <p>Approves land use planning parameters, including scheme amendments</p> <p>Approves changes to Noise Management Plan</p>
Airport Advisory Committee	<p>Provides input to:</p> <ul style="list-style-type: none"><li>• high level direction for Airport development and management</li><li>• changes to Noise Management Plan</li><li>• applications for ongoing special event or special circumstance exemptions</li></ul>

<p>The Chief Executive Officer</p>	<p>Informs and makes recommendations to the Council and/or Airport Advisory Committee</p> <p>Manages the day to day operations of the Busselton-Margaret River Airport</p> <p>Ensures compliance with the NMP and Flight Training Permits</p> <p>Considers applications for Charter and RPT services in accordance with the NMP</p> <p>Considers one-off special event or special circumstances exemptions</p> <p>Considers requests for flight training permit renewal</p> <p>Considers Noise amelioration assessments and implementation packages</p>
------------------------------------	---

## Compliance Framework

Operators are required to comply with the parameters outlined in this Noise Management Plan and in accordance with any approval granted by the City for operations at the Busselton-Margaret River Airport.

In order to seek/enforce compliance by aircraft operators with the requirements and objectives of this NMP, the City of Busselton shall implement/employ the following measures with regards to land based activities at BMRA:

- City of Busselton Airport Local Law;
- Fly Neighbourly Agreements with aircraft operators;
- Consultation with aircraft operators using the BMRA;
- Reporting non-compliance to relevant government agencies (like CASA, AirServices Australia and OEPA);
- Infringe serial non-compliant aircraft operators in accordance with City of Busselton local laws;
- Ban serial non-compliant aircraft operators from using the facilities at the airport (banning certain non-compliant activities at the airport or prohibiting such operators from landing and taking off from the aerodrome).

## Review Process

The review of the Noise Management Plan will be undertaken every three years in conjunction with the Airport Advisory Committee (or its equivalent replacement at any future time). The review will be undertaken in consultation with key stakeholders, including the community, Industry, government agencies and airport users. The results of the review and any proposed changes to the NMP will be advertised for comment in the local newspapers following Council's consideration of the recommended changes. It is noted that proposed amendments to the NMP may require approval under the Environmental Protection Act 1986 or other relevant Acts.

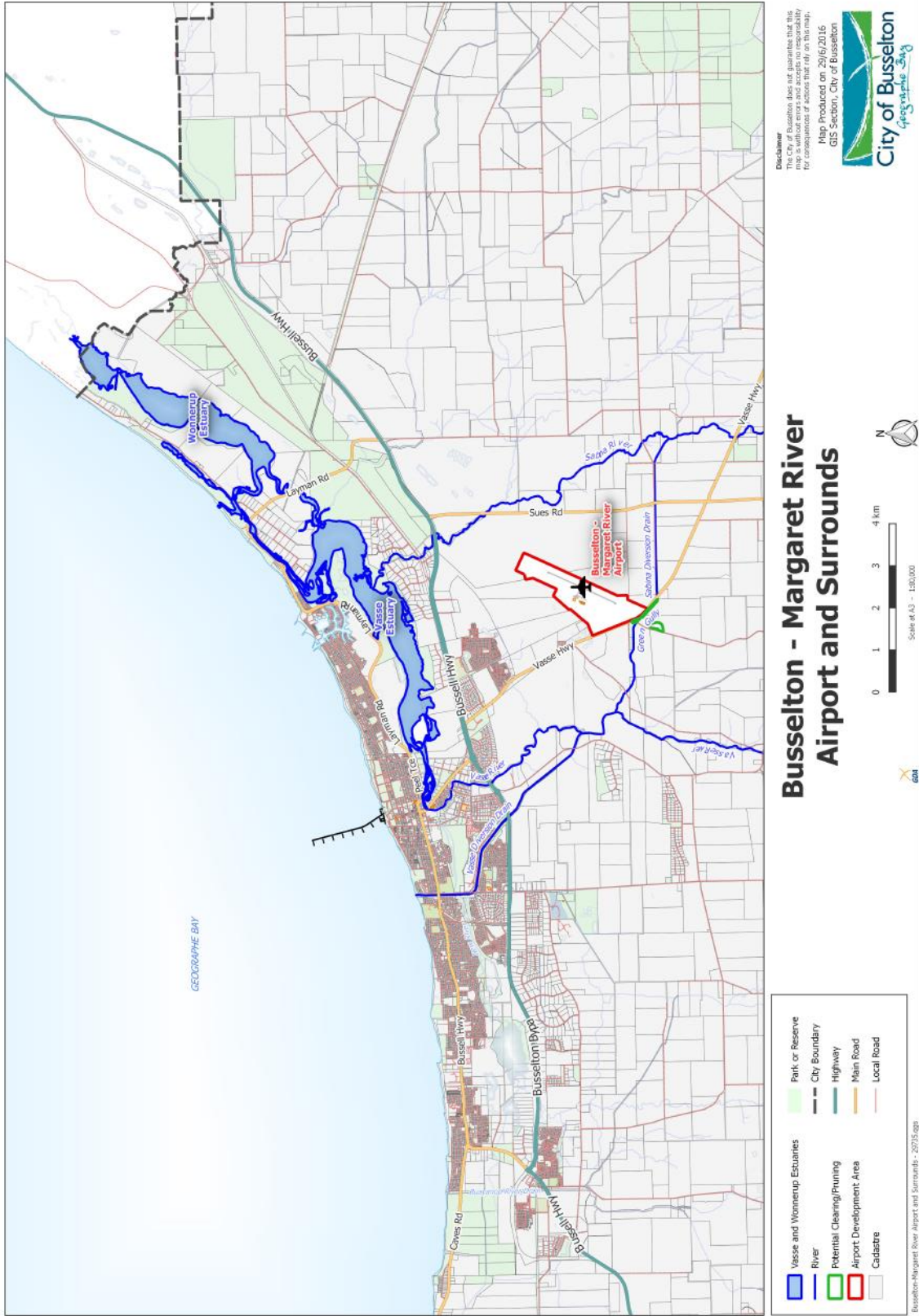
Any review of the NMP will take into consideration:

- How the development opportunities for the airport have been pursued;
- Whether the flight paths and noise abatement zones need updating;
- Whether the hours of operation need to be adjusted;
- How well noise emissions associated with the airport have been managed, which will include consideration of noise monitoring data, complaints statistics and compliance information.

The review will also include a review of the Fly Neighbourly Agreement and the Flight Training Guidelines.



# Appendix A – Busselton-Margaret River Airport Surrounds



## Appendix B – Busselton-Margaret River Airport Fly Neighbourly Agreement Template

Our Ref:  
Your Ref:  
Contact:



Date

Attn  
Address  
Address

Dear

### BUSSELTON MARGARET RIVER AIRPORT NOISE MANAGEMENT - FLY NEIGHBOURLY AGREEMENT

The City of Busselton, in accordance with the Busselton Margaret River Airport Noise Management Plan 2019 and Ministerial Statement 1088 (including subsequent Noise Management Plans and/or Ministerial Statements) has prepared this Fly Neighbourly Agreement (FNA) with the intention of minimising the impact of aircraft noise on local residents. The City of Busselton requests your cooperation in implementing this FNA.

In accordance with the Busselton Margaret River Airport Noise Management Plan (January 2022), all aircraft operators are to meet the requirements of the Plan which provides the guidelines on aircraft operations at the Busselton Margaret River Airport, the specific chapter of the NMP relevant to this Fly Neighbourly Agreement are;

- Airport Operational Activities: Noise Abatement Procedures
- Airport Operational Activities: Flight Paths
- Airport Operational Activities: Standard Hours of Operation
- Airport Operational Activities: Flight Training Guidelines

The Noise Management Plan (January 2022) can be found using the following link:  
[Community & Environment - Busselton Margaret River Airport](#)

### Fly Neighbourly Principles

The Noise Management Plan, Airport Operational Activities: Fly Neighbourly Agreement lists the following principles for pilots and aircraft operators utilising the Busselton Margaret River Airport to observe;

- Observe the flight path principles in the NMP;
- Observe residential noise abatement zones as identified in the NMP;
- Pilots should endeavour to maximise flight paths over coastal water, forest and highways while avoiding residential areas and rural homes wherever possible;
- Avoid flying below 1000 feet AGL within the circuit area, and avoid flying below 1500 feet AGL over built up areas;

All Communications to:

The Chief Executive Officer  
Locked Bag 1  
BUSSELTON WA 6280  
T: (08) 9781 0444 E: [city@busselton.wa.gov.au](mailto:city@busselton.wa.gov.au)  
[www.busselton.wa.gov.au](http://www.busselton.wa.gov.au)

Events Capital WA

- Observe the Operational Limitations and Approved Parameters defined in the Standard Hours of Operation;
- Observe the noise generation specifications as depicted in the NMP;
- During take-off:
  - utilise the full length of the runway where possible;
  - aircraft to climb out at best rate of climb (V<sub>X</sub>) or for Jet aircraft to conduct jet noise abatement climb procedures;
  - consider neighbours when selecting power and propeller pitch control settings by reducing power as soon as possible after take-off.
- When flying in the circuit:
  - light and rotary wing aircraft should avoid flying below 1000 feet (AGL);
  - jet and turbo prop aircraft should not fly below 1500 feet (AGL);
  - rotary wing aircraft should avoid 'rotor slap' conditions in the circuit area;
  - avoid using individual houses as circuit reference points.
- When landing:
  - Do not increase propeller to full RPM until power has been reduced to final approach power.

The City of Busselton is committed to managing aircraft operations in a Fly Neighbourly manner. We expect pilots and aircraft operators using the Busselton Margaret River Airport to undertake operations in a manner that is considerate of local residents. While the safe operations of aircraft must be maintained at all times, pilot and aircraft operators are required to make best efforts to ensure compliance with this Fly Neighbourly Agreement.

I acknowledge the City of Busselton's Fly Neighbourly Principles and intention to minimise the impacts of aircraft noise on the local community and will endeavour to comply with this FNA at all times except where aircraft safety takes precedence.

Signed on Behalf of City of Busselton

Signed on behalf of \_\_\_\_\_  
(Company name)

\_\_\_\_\_

\_\_\_\_\_ (signature)

\_\_\_\_\_ (name)

Manager Economic and Business Development Services  
City of Busselton

\_\_\_\_\_ (position)

All Communications to:  
The Chief Executive Officer  
Locked Bag 1  
BUSSELTON, WA 6280  
T: (08) 9781 0444 E: [city@busselton.wa.gov.au](mailto:city@busselton.wa.gov.au)  
[www.busselton.wa.gov.au](http://www.busselton.wa.gov.au)

Events Capital WA