Report and recommendations of the Environmental Protection Authority

Busselton-Margaret River Airport expansion - revised proposal

City of Busselton

Report 1616
June 2018
## Environmental Impact Assessment Process Timelines

<table>
<thead>
<tr>
<th>Date</th>
<th>Progress stages</th>
<th>Time (weeks)</th>
</tr>
</thead>
<tbody>
<tr>
<td>30/11/2016</td>
<td>EPA decides to assess – level of assessment set</td>
<td></td>
</tr>
<tr>
<td>16/02/2017</td>
<td>EPA approved Environmental Scoping Document</td>
<td>11</td>
</tr>
<tr>
<td>15/06/2017</td>
<td>EPA accepted Environmental Review Document</td>
<td>17</td>
</tr>
<tr>
<td>03/07/2017</td>
<td>Environmental Review Document released for public review</td>
<td>3</td>
</tr>
<tr>
<td>14/08/2017</td>
<td>Public review period for Environmental Review Document</td>
<td>6</td>
</tr>
<tr>
<td>22/01/2018</td>
<td>EPA accepted Proponent Response to Submissions</td>
<td>23</td>
</tr>
<tr>
<td>15/02/2018</td>
<td>EPA board meeting</td>
<td>4</td>
</tr>
<tr>
<td>04/04/2018</td>
<td>EPA received further information for assessment</td>
<td>7</td>
</tr>
<tr>
<td>19/04/2018</td>
<td>EPA board meeting</td>
<td>2</td>
</tr>
<tr>
<td>08/05/2018</td>
<td>EPA received final information for assessment</td>
<td>2</td>
</tr>
<tr>
<td>25/05/2018</td>
<td>EPA provided report to the Minister for Environment</td>
<td>3</td>
</tr>
<tr>
<td>06/06/2018</td>
<td>EPA report published</td>
<td>11 days</td>
</tr>
<tr>
<td>20/06/2018</td>
<td>Close of appeals period</td>
<td>2</td>
</tr>
</tbody>
</table>

Timelines for an assessment may vary according to the complexity of the proposal and are usually agreed with the proponent soon after the EPA decides to assess the proposal and records the level of assessment.

In this case, the Environmental Protection Authority met its timeline objective to complete its assessment and provide a report to the Minister.

Dr Tom Hatton  
Chairman  
25 May 2018
Contents

1. Introduction .......................................................................................................................... 1
   1.1 EPA procedures .................................................................................................................. 1

2. The revised proposal ............................................................................................................ 2
   2.1 Proposal summary ............................................................................................................ 2
   2.2 Changes to the proposal during assessment .................................................................... 6
   2.3 Context ............................................................................................................................. 6
   2.4 Regulatory framework ..................................................................................................... 7
   2.5 Approved NMP ................................................................................................................. 8

3. Consultation .......................................................................................................................... 8

4. Key environmental factors ................................................................................................... 9
   4.1 Social Surroundings ......................................................................................................... 10

5. Conclusion ............................................................................................................................ 20

6. Other advice .......................................................................................................................... 21

7. Recommendations ............................................................................................................... 22

References .................................................................................................................................. 43

Tables
Table 1: Summary of the Proposal ............................................................................................ 3
Table 2: Location and proposed extent of physical and operational elements ....................... 3

Table 1: Summary of the Proposal ............................................................................................ 3
Table 2: Location and proposed extent of physical and operational elements ....................... 3

Figures
Figure 1: Regional location and Busselton-Margaret River Airport development envelope ....... 5

Appendices
1. List of submitters
2. Consideration of principles
3. Evaluation of other environmental factors
4. Proposed changes to conditions for revised proposal
5. Identified decision-making authorities and recommended environmental conditions
6. References
1. Introduction

This report provides the advice and recommendations of the Environmental Protection Authority (EPA) to the Minister for Environment on the outcomes of the EPA’s environmental impact assessment (EIA) of the revised proposal by the City of Busselton to modify the existing Busselton Margaret River Airport (BMRA) operations. The proposed revisions would allow additional aircraft types (such as Boeing 737 (B737)) and operator aircraft types (such as freight) to use the airport, as well as change the hours of operation.

The EPA has prepared this report in accordance with section 44 of the Environmental Protection Act 1986 (EP Act), which requires that the EPA prepare a report on the outcome of its assessment of a proposal and provide this assessment report to the Minister for Environment. The report must set out:

- What the EPA considers to be the key environmental factors identified in the course of the assessment.
- The EPA’s recommendations as to whether or not the proposal may be implemented and, if the EPA recommends that implementation be allowed, the conditions and procedures to which implementation should be subject.

The EPA may also include any other information, advice and recommendations in the assessment report as it thinks fit.

The proponent referred the proposal to the EPA on 7 July 2016. On 30 November 2016, the EPA published its decision to assess the revised proposal and set the level of assessment at Public Environmental Review with a six-week review period. The EPA approved the Environmental Scoping Document for the proposal on 2 March 2017. The Environmental Review Document (ERD) was released for public review from 3 July 2017 to 14 August 2017.

1.1 EPA procedures

The EPA introduced a new suite of EIA procedures on 13 December 2016. The EPA followed the procedures in the Environmental Impact Assessment (Part IV Divisions 1 and 2) Administrative Procedures 2016 and the Environmental Impact Assessment (Part IV Divisions 1 and 2) Procedures Manual 2016, to the extent that it was appropriate and practicable. The EPA consulted the proponent on the application of the current procedures to its assessment of the proposal.
2. The revised proposal

2.1 Proposal summary

The proponent, the City of Busselton, proposes a change (referred to in this report as the 'revised proposal') to its approved proposal (referred to as 'the approved project') to allow additional aircraft types (such as B737) and operator aircraft types (such as freight) to use the airport, and to change the hours of operation.

Restrictions on the hours of operation and types of aircraft were key considerations in the EPA’s assessment of the proposal and changes to conditions and are key elements of the approved Noise Management Plan (NMP). Therefore, the proposed changes required detailed assessment by the EPA.

The approved project is covered by the following Ministerial Statements:

- Ministerial Statement 901, issued on 22 June 2012, required the implementation of a NMP (2012) to ensure that noise emissions from aircraft using the aerodrome are effectively managed. The approval also has a provision for limited aircraft movements outside of the restricted operating hours, as detailed in column 3 of Table 2.


The proposed change comprised the following additional activities and elements:

- Introduction of additional aircraft types (B737) and aircraft operator types (freight) to use the airport.

- Changing the hours of operations, including allowing additional night-time aircraft movements, as detailed in column 5 of Table 2.

- Amendments to the physical infrastructure elements of the airport including, lengthening, widening and strengthening the runway. This component is discussed further in Section 2.2 of the report.

The key characteristics of the revised proposal (an amalgamation of the existing approved project and the proposed change), are summarised in tables 1 and 2 below. A detailed description of the proposed change in relation to the existing approved project is provided in Section 2 of the ERD (Strategen 2017) and the 2018 NMP (City of Busselton 2018a).

In undertaking this assessment, the EPA has assessed the impacts of the proposed change in the context of the approved project, considering the cumulative impacts of the entire revised proposal where appropriate.
Table 1: Summary of the Proposal

<table>
<thead>
<tr>
<th>Proposal Title</th>
<th>Busselton-Margaret River Airport Expansion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short Description</td>
<td>The proposal is to operate a regional airport at 86 Neville Hyder Drive, Yalyalup, Western Australia.</td>
</tr>
</tbody>
</table>

Table 2: Location and proposed extent of physical and operational elements

<table>
<thead>
<tr>
<th>Element</th>
<th>Location</th>
<th>Approved operational parameters</th>
<th>Proposed change</th>
<th>Proposed operational parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operational elements</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Airport operations</td>
<td>Figure 1</td>
<td>• Emergency services – unrestricted (training flights require approval)</td>
<td>• Introduction of additional aircraft types</td>
<td>• Emergency services – unrestricted (training flights require approval)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Light aviation – single engine under 2000 kg MTOW not exceeding 65dB(A)* – unrestricted hours (flight training requires approval)</td>
<td>• Introduction of additional aircraft operator types to include freight flights</td>
<td>• Light aviation/general aviation – 0600–2200 – maximum noise level of 85dB(A)** (flight training approval required – only available for aircraft below 1500 kg MTOW)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• General aviation – 0700–1900 May to Nov and 0600–2100 Dec to April – noise not to exceed 85dB(A)* (City approval required)</td>
<td>• Modify standard hours of operation, including night-time flights</td>
<td>(aircraft above 5700 kg MTOW City approval required)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Open and closed charter flights – 0600–2200 – noise not to exceed 85dB(A)* (City approval required)</td>
<td></td>
<td>• Open/closed charters, regular passenger transport/commercial operators – 0600–0000 – five flights per week approved between 0000–0600 – maximum noise level of 85dB(A)** (City approval required)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Regular passenger transport flights – 0600–2300 – noise not to exceed 85dB(A)* (City approval required)</td>
<td></td>
<td>• Non-conforming activity for a single event or circumstance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 12 single events or circumstances in relation to non-conforming activity</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*depending on the flight training approval requirements
**depending on City approval requirements
## Element

<table>
<thead>
<tr>
<th>Location</th>
<th>Approved operational parameters</th>
<th>Proposed change</th>
<th>Proposed operational parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical elements</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Runway and associated infrastructure</td>
<td>Figure 1</td>
<td>1800 m long x 30 m wide</td>
<td>Lengthen and widen runway</td>
</tr>
</tbody>
</table>

MTOW – maximum take off weight  
City – City of Busselton  
kg – kilograms  
m - metres

* These aircraft noise levels are not to be exceeded at any residential or other noise sensitive location when determined as an L<sub>ASlow</sub> value at any point within 15 metres (m) of the identified building.

** These aircraft noise levels are maximum noise levels recorded at any residential or other noise sensitive location when determined as an L<sub>ASlow</sub> value at any point within 15 m of the identified building. Noise levels regularly exceeding this may initiate noise mitigation procedures.

---

1 L<sub>ASlow</sub> – means the reading in decibels (dB) obtained using the ‘A’ frequency weighting characteristic and the ‘S’ time weighting characteristic as defined in the Environmental Protection (Noise) Regulations 1997.
Figure 1: Regional location and Busselton-Margaret River Airport development envelope
2.2 Changes to the proposal during assessment

The City of Busselton requested that the EPA consent to a change to the revised proposal during assessment on 2 December 2016. This was to remove the physical infrastructure components from the proposal, including the runway extension, and widening and strengthening component.

The EPA Chairman, as a delegate of the EPA, concluded that the changes were unlikely to significantly increase any impact that the revised proposal may have on the environment and gave consent under section 43A of the EP Act to the change on 13 December 2016.

On 11 November 2016, the City of Busselton applied for a change to the approved project under Ministerial Statement 901 to increase the development envelope from 166.4 hectares (ha) to 206.2 ha. This was to include land that had been acquired and infrastructure associated with the runway extension.

The EPA Chairman concluded that the changes were unlikely to result in a significant detrimental effect on the environment in addition to, or different from, the effect of the original proposal, and granted approval to the changes under section 45C of the EP Act on the 15 December 2016.

2.3 Context

The airport is located 6.5 kilometres (km) south-east of Busselton’s town centre and is surrounded both by urban residential areas and by agricultural land (mostly dairy and beef cattle enterprises) with isolated noise-sensitive residences. The closest urban residential area is Yalyalup about 2 km north-west of the proposal, followed by the Reinscourt residential area 2.7 km to the north (Figure 1).

Recreational areas near the revised proposal include the Tuart Forest National Park about 3 km to the north-east. Managed by the Department of Biodiversity, Conservation and Attractions, the park is used by the public for forest walks and bird watching. The revised proposal also lies 3.5 km to the south of the Vasse-Wonnerup wetlands system, which is listed as a Ramsar wetlands site.

The airport was constructed in 1996 at the current location of Four Mile Hill following an EPA assessment in 1995 which concluded that the approved project was environmentally acceptable (EPA Bulletin 785). At the time the proposal was assessed it was envisaged that the regional aerodrome would cater for smaller aircrafts with lower noise emissions flying during the day.
2.4 Regulatory framework

In assessing the revised proposal, the EPA has noted the following considerations about the regulatory framework for regional airports.

Noise from aircraft is not covered by the Environmental Protection (Noise) Regulations 1997. Furthermore, the Department of Transport advises that no State government transport policy exists that specifically relates to aircraft noise issues for regional airports in Western Australia.

The Department of Transport advises that Airservices Australia is the primary agency responsible for aircraft noise on air routes across the country. Further to this, the Commonwealth Office of the Aircraft Noise Ombudsman conducts independent administrative reviews of Airservices Australia’s management of aircraft noise related activities, including handling of complaints and community consultation processes related to aircraft noise.

BMRA is classified as ‘uncontrolled airspace’, which means there are no mandatory defined flight paths. It should also be noted that the proponent does not have jurisdiction over the airspace which is managed by Airservices Australia and the Civil Aviation Safety Authority. However, the proponent has advised that it is able to manage the timing and numbers of aircraft as flight training operators, open/closed charters, regular passenger transport and commercial operators require the proponent’s approval before being permitted to using the airport.

The proponent has based its assessment on measures outlined in the Australian Standard 2021:2015 Acoustics – Aircraft noise intrusion – Building siting and construction (AS2021:2015) and the National Airports Safeguarding Framework Principles and guidelines – Guideline A – Measures for Managing Impacts of Aircraft Noise (2016). The EPA considers that these policies do not directly apply to regional airports such as BMRA for the following reasons:

- The AS2021:2015 is intended for assessing the effects of aircraft noise on new land developments near existing airports, rather than assessing the effects of aircraft noise on existing properties.
- The proponent uses building site acceptability criteria from Table E1 (Appendix E of AS2021:2015) for its noise assessment and amelioration process, however the values in Table E1 do not apply to BMRA as they are based on non-jet aircraft movements and BMRA operations include jet aircraft movements.
- The Australian Noise Exposure Forecast (ANEF) system has been recognised as a land use planning tool, and does not generally apply to the BMRA due to the small number of flights. It should also be noted that the proposed ANEF noise contours have not been endorsed by Airservices Australia.

However, in the absence of a suitable policy framework, these policies have been applied, where relevant, and as far as practicable.
2.5 Approved NMP

In 2012 the EPA assessed and recommended that a NMP apply to the operation of the airport to replace the prescriptive noise conditions. The EPA determined that the original conditions were restrictive on operations normally expected of a regional airport, but they also did not effectively deal with the main source of noise complaints.

The EPA recommended that the NMP provided for a more comprehensive, efficient and flexible management of noise than the original conditions.

3. Consultation


The proponent consulted with government agencies and key stakeholders during the preparation of the ERD. The agencies and stakeholders consulted, the issues raised and the proponent’s response are detailed in Table 3-1 of the proponent’s ERD (Strategen 2017).

Five government agency submissions and 91 public submissions were received during the public review period. The key issues raised relate to:

- Potential sleep disturbance from night-time flights.
- Potential noise impacts from larger aircrafts.
- Concerns about increasing the noise-level acceptability criteria and noise criterion for amelioration.
- Land use planning and noise abatement zones near the airport.
- Flight paths.
- Potential impacts on terrestrial fauna and waterbirds using the Ramsar wetlands.

Issues raised were addressed by the proponent in the Response to Submissions document (City of Busselton 2018b).

The proponent has formed a BMRA Consultative Group made up of representatives from the City of Busselton, business/industry, airport users, community members from potential noise-affected areas and airport neighbours (Strategen 2017).

Before the ERD was submitted the proponent requested comments and advice from the community, government agencies and other relevant stakeholders on a 2016 draft version of the NMP. As a result of the feedback, updates were applied to the NMP, including limiting night-time flights to five per week, and the draft 2017 plan was submitted with the ERD.
The EPA considers that the consultation process has been appropriate and that reasonable steps have been taken to inform the community and stakeholders about the revised proposal. Relevant significant environmental issues identified from this process were taken into account by the EPA during its assessment of the proposal.

4. Key environmental factors

In undertaking its assessment of this revised proposal and preparing this assessment report, the EPA had regard for the object and principles contained in s4A of the EP Act to the extent relevant to the particular matter to be considered.

The EPA considered the following information during its assessment:

- The proponent’s referral information and ERD.
- Public comments received on the referral, stakeholder comments received during preparation of the proponent’s documentation, and public and agency comments received on the ERD.
- The proponent’s response to submissions raised during the public review of the ERD.
- The EPA’s own inquiries.
- The EPA’s Statement of environmental principles, factors and objectives (EPA 2016).
- The relevant principles, policy and guidance referred to in the assessment of the key environmental factor Social Surroundings in Section 4.1.

Having regard to the above information, the EPA identified the following key environmental factor during the course of its assessment of the proposal:

- **Social Surroundings** – the proposal would generate noise emissions from aircraft which may unreasonably interfere with the health, welfare, convenience and comfort of people, particularly at night-time.

The EPA considered other environmental factors during the course of its assessment of the revised proposal. These factors, which were not identified as key environmental factors, are discussed in the ERD (Strategen 2017). Appendix 3 contains an evaluation of why these other environmental factors were not identified as key environmental factors.

Having regard to the EP Act principles, the EPA considered that the following principles were particularly relevant to its assessment of the proposal:

1. **The precautionary principle** – noise modelling has been undertaken to evaluate the potential impacts, from noise emissions to noise-sensitive receptors. There is no threat of serious or irreversible damage from noise emissions where restrictions to airport operations are applied.

2. **Principles relating to improved valuation, pricing and incentive mechanisms** – the proponent would bear the cost for monitoring
requirements and noise amelioration for any affected residences in accordance with the NMP.

Appendix 2 provides a summary of the principles and how the EPA considered these principles in its assessment.

The EPA’s assessment of the revised proposal’s impacts on the key environmental factor is provided in Section 4.1. This section outlines whether or not the EPA considers that the impacts on this factor are manageable. Section 5 provides the EPA’s conclusion as to whether or not the revised proposal as a whole is environmentally acceptable.

**Changes to EPA environmental policy and guidance**

The EPA introduced a new suite of environmental guidance for environmental impact assessment on 13 December 2016. This replaced EPA policy and guidance that were current at the time of referral.

In its assessment of the revised proposal, the EPA considered and gave due regard to, where relevant, its current environmental impact assessment policy and guidance documents. The EPA consulted the proponent on the application of the current environmental impact assessment policy and guidance documents relevant to its environmental review and the EPA’s assessment of the revised proposal.

### 4.1 Social Surroundings

**EPA Objective**

The EPA’s environmental objective for this factor is to protect social surroundings from significant harm.

**Relevant policy and guidance**

The EPA considers that the following current environmental policy and guidance is relevant to its assessment of the revised proposal for this factor:

- *Environmental factor guideline – Social Surroundings* (EPA, 2016)

The considerations for environmental impact assessment for this factor are outlined in *Environmental factor guideline – Social Surroundings* (EPA, 2016).

**EPA Assessment**

The revised proposal has the potential to affect noise-sensitive premises and thereby potentially impact on the health, welfare, convenience and comfort of people, particularly at night-time, due to noise emissions generated from aircraft. Noise-sensitive premises\(^2\) are those occupied for residential or accommodation purposes

---

\(^2\) The definition of noise-sensitive premises is taken from the Environmental Protection (Noise) Regulations 1997.
and also include premises used for other purposes such as hospitals and education facilities.

The BMRA is surrounded by isolated rural residential properties and the proposed flight paths would go over surrounding rural and residential areas including Reinscourt, Yalyalup and the Busselton central business district. The EPA notes the proponent is reviewing alternative flight paths to minimise impacts to noise-sensitive premises. Noise modelling has not been undertaken to determine the noise impacts for these alternative flight paths and is therefore not included in the assessment.

The EPA notes that the military and emergency services will continue to have unrestricted access to the BMRA (such as the Royal Flying Doctor Service, Surf Life Saving WA, Department of Fire and Emergency Services).

Consistent with the *Environmental factor guideline: Social Surroundings* (EPA 2016), the EPA has considered the potential impacts of noise emissions from the revised proposal on social surroundings. As a result of the revised proposal, the proponent’s approved 2015 NMP requires amendments. The EPA has assessed the revised proposal, which includes the proposed amendments to the approved 2015 NMP. The EPA has set out the assessment of the revised proposal under the following key headings:

- Current operations.
- Potential impacts.
- Proposed management.

**Current operations**

The existing BMRA operations see an average of 200 aircraft movements per week comprising of general aviation, recreational aviation (small aircraft) and emergency services (88 per cent), with the remaining 12 per cent being fly-in fly-out (FIFO) closed/open charter. However, regular passenger transport – defined as 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 – is also permitted under current approvals, but has not occurred since 2015.

Jet aircraft Fokker 100 (F100) is used for FIFO operations, and is the noisiest aircraft using the BMRA at present. Although existing environmental approvals permit open/closed charter flights from 0600 until 2200 hours, these operations generally start from 0600 hours and finish at about 2000 hours.

Emergency services and light aviation are unrestricted with regard to standard hours of operation, but light aviation aircrafts must not exceed noise levels of 65 dB(A) at any residential or other noise-sensitive location.

The approved project currently allows the CEO of the City of Busselton to approve up to 12 non-conforming events per year, defined as events occurring between 2300 hours on any day and 0600 hours on the following day.
It should be noted that irrespective of this proposal, the current operations are allowed to grow in the future under the existing environmental approval. Forecasts for 2018–19 indicate an average of 264 weekly aircraft movements: this is due to a significant increase in emergency service helicopter activities. The number of weekly aircraft movements is expected to rise to 300 during the next 20 years (2038–39).

Furthermore, irrespective of this revised proposal, under its existing environmental approval the proponent may increase the number and type of jet aircraft operations for regular passenger transport (including interstate services) subject to compliance with the conditions set out in Ministerial Statements 901 and 1009.

Potential impacts
In its assessment of the potential impacts and proposed management of the revised proposal’s impacts, the EPA has discussed below the following elements of the airport operation:

- Larger jet aircraft types.
- Flight training.
- Night-time flights (between 0000 and 0600 hours).
- Standard hours of operation.
- Noise-level acceptability and noise-amelioration criterion.

The proponent undertook noise modelling to determine the potential noise impacts from the revised proposal by using three noise measures in its assessment. Each measure had a different purpose and included some or all of the factors that influence the impact of aircraft noise, such as aircraft noise levels, frequency of occurrence, duration of each movement and the character of aircraft noise (e.g. low frequency rumble). Table 3 displays each measure and whether the output information for each factor influencing the impact of aircraft noise is discernible.

Table 3: Noise measures and their factors included in the calculations

<table>
<thead>
<tr>
<th>Noise measure</th>
<th>Australian Noise Exposure Forecast/Australian Noise Exposure Contour (ANEF/ANEC)</th>
<th>N70/60</th>
<th>Single event or maximum noise level (LA_{max})</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definition</td>
<td>ANEF/ANEC are official forecasts of future noise exposure patterns around an airport and they constitute the contours on which land use planning authorities base their controls. The contours are sourced from factors such as aircraft noise signatures, distance from source of noise, duration and frequency of events, and they account for night-time operations being weighted higher than day-time</td>
<td>Noise contours on a map which 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.</td>
<td>An estimate of the maximum noise levels that may be experienced at ground level from an individual aircraft movement. It does not differentiate between day or night.</td>
</tr>
<tr>
<td>Operations to calculate average noise levels on the ground.</td>
<td>Yes, but this information is not discernible from the output. The ANEF/ANEC is an index and not a level.</td>
<td>Partially – this is included in the calculations but noise-level information is grouped within bands and areas exposed to higher noise levels are not readily discernible.</td>
<td>Yes, the output indicates the maximum noise level from a single (chosen) aircraft type.</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Number of events</td>
<td>Yes, but this information is not discernible from the output.</td>
<td>Yes, this information is illustrated in contours of equal numbers of noise events.</td>
<td>No.</td>
</tr>
<tr>
<td>Duration of events</td>
<td>Yes, but this information is not discernible from the output.</td>
<td>No.</td>
<td>No.</td>
</tr>
<tr>
<td>Aircraft noise character</td>
<td>Yes, ANEF is based on the Effective Perceived Noise Level which includes modification for noise tonal characteristics.</td>
<td>No.</td>
<td>No.</td>
</tr>
</tbody>
</table>

**Larger jet aircraft types**

Implementation of the revised proposal would result in changes to the flight paths of aircraft movements in airspace due to the introduction of new destinations, such as Sydney/Melbourne, and aircraft types.

The revised proposal for the BMRA expansion would potentially result in an additional 10 weekly movements in 2018–19 and 32 weekly movements in 2038–39 of larger jet aircrafts. These additional flights would be to support new regular passenger transport flights and freight aircraft. It is expected that the aircraft used for regular passenger transport and freight would be the B737 and potentially Airbus A320.

The proponent has used the B737 aircraft for noise modelling as it would be the noisiest of the jet aircrafts to use the airport, thus presenting the worst-case scenario. Noise levels generated by the B737 are generally 3–7 dB(A) higher than those of the current noisiest aircraft (F100) using the BMRA, as indicated by AS2021:2015. In terms of sound perception, 3 dB(A) corresponds to a small but noticeable change of loudness (for most people). Every 10 dB(A) increase in sound level is perceived as a doubling of loudness.

The current approved NMP (2015) states that under Ministerial Statement 1009, aircraft noise levels are not to exceed 85 dB(A) at any residential or other noise-sensitive locations. The proponent proposes to remove this limit and considers that ‘noise limits not to be exceeded’ are not practical or enforceable, as the sound level depends on many factors including the type of aircraft, location of the aircraft and receiver, meteorological conditions and topography.

The proponent is proposing a maximum noise level of 85 dB(A). The associated intention is not to prohibit aircraft from using the BMRA after an exceedance, but to manage noise impacts using the maximum noise level as a trigger for amendments.
to operations to mitigate the noise impact or for implementing noise amelioration measures. This amendment would result in the B737 aircraft being able to use the BMRA with the potential that noise amelioration action would be triggered.

Flight training

The proponent is proposing to increase the number of training circuits permitted; that is, from four to six continuous circuits. This would potentially increase nuisance noise per flight training session. The proposed increase comes as a result of discussions with the only approved flight training operator, which is seeking to make the sessions cost effective for students. It should be noted that since the implementation of the original NMP (2012), noise complaints associated with flight training have reduced due to the regulation of their flights through the permit approval process as detailed in the 2018 NMP.

The current approved NMP (2015) states that under Ministerial Statement 1009, flight training aircraft noise levels are not to exceed 65 dB(A) at any residential or other noise-sensitive locations. The proponent proposes to remove this noise limit as ‘noise limits not to be exceeded’ are not practical or auditable as the sound level depends on many factors as explained above. The proponent has proposed to manage noise impacts from flight training through the permit approvals process as detailed in the 2018 NMP, requiring operators to commit in writing to observe the requirements of the Flight Training Guidelines (including aircraft size, total flying hours, capped continuous circuits, flying heights, hours of operation) and other aspects of the NMP, including the Fly Neighbourly Agreement.

Night-time flights (between the hours of 0000 and 0600)

The proposal seeks to introduce up to five night-time flights per week. These would occur between the hours of 0000 and 0600 for regular passenger transport, freight and closed/open charter flights. The proponent predicts this would result in an average of approximately one event per night above 60 dB(A) for four residences, with those residences near the BMRA potentially being exposed to up to 85 dB(A) aircraft noise (or an equivalent 75 dB(A) inside the residences).

The proponent has advised that once routes are established by airlines, night-time flights are expected to revert to daytime or early evening. However, the proponent cannot guarantee this.

Standard hours of operation

The proponent is proposing to modify the standard hours of operation. This would extend the timeframe in which flights could potentially occur each day, increasing noise exposure that may result in sleep disturbance.

The proponent has proposed the following amendments to the standard hours of operation:
- Light aviation aircraft (single engine aircraft under 2000 kg) are currently unrestricted. These aircraft are proposed to be grouped with general aviation and restricted to using the airport between the hours of **0600 and 2200**.

- General aviation aircraft are currently restricted to using the airport between the hours of 0700 and 1900 in May to November and the hours of 0600 to 2100 in December to April. These aircraft are proposed to be restricted all year round to using the airport between the hours of **0600 and 2200**.

- Open and closed charter flights are proposed to be grouped with regular passenger transport and instead of using the airport between the hours of 0600 and 2200, operating between the hours of **0600 and 0000** hours.

- Regular passenger transport flights are currently restricted to using the airport between the hours of 0600 and 2300. It is proposed that these flights be restricted to using the airport between the hours of **0600 and 0000**.

- It is proposed that commercial operators (freight) be able to use the airport between the hours of **0600 and 0000**.

The proponent is proposing these amendments to simplify the standard hours of operation structure in the NMP and to provide flexibility for airport users, including general aviation and commercial airlines operating interstate and international flights. The proponent proposes to distinguish aircraft and hours of operation on the following basis:

- Emergency services – exempt from operating hour restrictions.

- Scheduled services (includes regular passenger transport, open and closed charter services and commercial operators) – 0600–0000 hours with up to five flights per week between 0000–0600 hours.

- General aviation (including light aviation) – 0600–2200 hours.

**Noise-level acceptability and noise-amelioration criterion**

In determining noise reduction and amelioration measures to mitigate the impacts of aircraft noise on the surrounding community, the proponent is proposing to adopt the AS2021:2015 categories of ‘determination of building site acceptability’, which includes ‘Acceptable’, ‘Conditionally Acceptable’ and ‘Unacceptable’. These categories replace the four categories currently used in the 2015 NMP, as outlined in Table 4. However, the EPA notes that while the proponent has adopted the categories from the AS2021:2015, the associated definitions have not been adopted because these categories relate to the construction of new buildings, not existing buildings.

**Table 4: Differences between 2015 and 2018 NMP guide to noise level acceptability**

<table>
<thead>
<tr>
<th></th>
<th>Acceptable</th>
<th>Generally Acceptable</th>
<th>Conditionally Acceptable</th>
<th>Unacceptable</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2015 NMP</strong></td>
<td>&lt;65 dB(A)</td>
<td>65–75 dB(A)</td>
<td>75–85 dB(A)</td>
<td>&gt;85 dB(A)</td>
</tr>
<tr>
<td><strong>2018 NMP</strong></td>
<td>&lt;75 dB(A)</td>
<td></td>
<td>75–85 dB(A)</td>
<td>&gt;85 dB(A)</td>
</tr>
</tbody>
</table>
The proponent has justified the removal of the 65 dB(A) as the threshold of acceptability based on the number of flights per day as per the AS2021:2015 (Table E1 of Appendix E), that residential properties near the airport would not be subject to the volume of flights to meet this criterion.

Literature including the AS2021:2015 and State Planning Policy 5.1 *Land use planning in the vicinity of Perth Airport* (2015) specify that indoor sound levels for sleeping areas should be below 50 dB(A). The proponent has adopted this indoor noise criterion as one of the target levels to ensure adequate design of insulation packages.

The EPA notes that an outside noise-level criterion of 65 dB(A) roughly equates to a 55 dB(A) indoor noise level with the windows open. Therefore, increasing the acceptability criterion of the outdoor noise level to 75 dB(A) would mean residences would be exposed to higher indoor noise levels above those recommended for sleeping areas.

In addition to amending the noise acceptability levels, the proponent has also proposed to increase the outdoor noise-level criteria and number of events for determining when noise amelioration action is required (see Table 5). The 2018 NMP includes provisions for noise monitoring to confirm actual noise levels occurring and, where noise exposure exceeds the outdoor noise criteria, noise amelioration implementation would be investigated and implemented where appropriate.

**Table 5 – Noise criteria for amelioration**

<table>
<thead>
<tr>
<th>Approved outdoor noise criteria</th>
<th>Proposed outdoor noise criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) 85 dB(A) (regularly exceeds); or</td>
<td>(1) 85 dB(A) (regularly exceeded); or</td>
</tr>
<tr>
<td>(2) 80 dB(A) for &gt;6 events per day; or</td>
<td>(2) 80–85 dB(A) for &gt;15 events per day; or</td>
</tr>
<tr>
<td>(3) 75 dB(A) for &gt;12 events per day; or</td>
<td>(3) 75–80 dB(A) for &gt;30 events per day</td>
</tr>
<tr>
<td>(4) 65 dB(A) for &gt;20 events per day</td>
<td>and/or ANEF 20–25</td>
</tr>
</tbody>
</table>

Night-time and evening flights that occur during sensitive hours (movements between the hours of 1900 and 0700) are weighted four times greater than a daytime event, in accordance with AS2021:2015.

To date the proponent has undertaken noise amelioration at two existing residential properties near the BMRA that have qualified for noise amelioration in accordance with the noise criteria of the existing NMP (2015). The proponent is also negotiating with other residents in relation to the noise amelioration process.

Although the trigger level of the proposed outdoor criteria has been increased by 10 dB(A), the proponent predicts that implementation of the revised proposal using the proposed outdoor noise criteria in Table 5, may result in a further four residences potentially being eligible for amelioration. Noise monitoring would be undertaken when operations begin to verify these predictions.

The proponent states that the noise-level acceptability and noise-amelioration criteria detailed in the existing NMP (2015) (shown in tables 4 and 5) are measures that the
proponent developed in 2012 for the original NMP in consultation with the former Department of Environment and Conservation. The proponent considers the proposed amendments align with the AS2021:2015.

However, the EPA notes that the criteria from AS2021:2015 (Table E1 of Appendix E) are based on non-jet aircraft movements and BMRA operations include jet aircraft movements.

**Management and mitigation**

The proponent has revised the NMP to manage the impacts from the revised proposal (City of Busselton 2018a).

To minimise potential impacts from the proposed increase to standard operating hours, particularly from night-time flights and larger jet aircrafts using the BMRA, the proponent proposes to:

- Cap the number of night-time flights per week during 0000 and 0600 hours to five flights (10 movements).
- Continue to weight night-time/evening events (between 1900 and 0700 hours) four times greater than a day-time event when applying noise management measures such noise amelioration.
- Implement noise mitigation measures including amelioration where noise monitoring determines noise levels meet the outdoor noise criteria.
- Enter into Fly Neighbourly Agreements with commercial operators.
- Continue to review flight path design to minimise residential overflights.

Flight training guidelines in the NMP (2018) include restrictions on training aircraft types to single engine. Further to this, the aircraft type along with a maximum take off weight of 1500 kg limits the potential aircraft noise emissions. Light aircraft generally emit noise emissions measuring less than 75 dB(A). The revised NMP also limits the cumulative total of training flight hours to less than 25 flying hours, which has not changed from the currently approved NMP (2015).

The EPA supports the proponent’s proposed management measures to minimise noise impacts during noise sensitive hours by capping the night-time flights to five flights or ten movements per week. However, the EPA does not support the proponent’s proposed hours for night-time flights; that is, 0000 to 0600. Instead the EPA considers that to minimise noise impacts and the potential for sleep disturbance, the five night-time flights (10 movements) per week should only occur between the hours of 2300 and 0600.

Similarly, the EPA does not support the proponent’s proposal to increase the standard hours of operation for open/closed charter flights, regular passenger transport and commercial operations (e.g. freight) from 0600 to 2300 hours to between the hours of 0600 and 0000. Instead the EPA considers that to minimise potential sleep disturbance, the standard hours of operation for these aircrafts should continue to be restricted to between 0600 and 2300. The EPA notes that limiting the use of the airport to between the hours of 0600 and 2300 is in line with airports
around Australia including Adelaide, Essendon Fields, Gold Coast and Sydney airports.

The EPA considers that for certain situations outside of the scheduled five night-time flights per week, (as allowed for in the current approved project under Ministerial Statement 901 and 1009), the 12 special events of single events or circumstances per year should be maintained. This would accommodate situations including inclement weather, unserviceable aircraft, or one-off events.

The EPA notes the proposed amendments to the standard hours of operation for light and general aviation to between 0600 and 2200. The EPA considers the change in the standard hours of operation can be managed as flights after 1900 hours attract a penalty by being weighted four times when applying noise management measures such as noise amelioration packages.

The EPA notes that the military and emergency services will continue to have unrestricted use of the BMRA.

The EPA considers that the proponent’s removal of the noise-level acceptability and noise criterion for amelioration at 65 dB(A) is acceptable. The EPA understands that this noise level was initially introduced to manage impacts from larger volumes of light aircraft activities such as flight training. The EPA considers the NMP has appropriate and more practical provisions for managing noise impacts from flight training activities. As mentioned previously, this includes limiting aircraft size, capping total flying hours, capping continuous circuits and flying height restrictions.

However, the EPA considers that the proponent’s use of the AS2021:2015 (Table E1 of Appendix E) for the proposed noise amelioration criteria is not acceptable because this criterion does not apply to aerodromes with jet aircrafts (as is the case with the BMRA). The EPA believes the number of events triggering amelioration measures should be maintained as is currently approved for the noise levels of 75 dB(A) (>12 events per day), 80 dB(A) (>6 events per day) and 85 dB(A) (regularly exceeds) as per the 2015 NMP. This will ensure that amelioration measures are applied appropriately to maintain indoor noise amenity.

The EPA notes the proponent has incorporated the above EPA recommendations in the Busselton-Margaret River Airport Noise Management Plan (version 1, May 2018). The EPA has recommended condition 5-2 requiring the implementation of the Plan. The EPA has also recommended a condition (condition 6-1) requiring review of the effectiveness of the approved NMP three years from the issue of the Ministerial Statement. The review would include reporting on noise monitoring results, noise amelioration assessments and/or implementation, complaints management, and published flight path amendments.

**Summary**

The EPA has paid particular attention to:

- The *Environmental factor guideline – Social Surroundings* (EPA 2016).
- The proponent’s noise modelling.
• The proposed mitigation and management measures outlined in the proponent’s NMP.

The EPA considers, having regard to the relevant EP Act principles and environmental objective for Social Surroundings that the impacts to this factor may be manageable; however, some uncertainty exists as to whether the impacts may remain significant and therefore some changes could not be supported by the EPA because:

• Extending the standard hours of operation would increase noise emissions from jet aircrafts during the sensitive hours of the evening and potentially disturb sleep. As a result, the EPA considers that open/closed charter flights, regular passenger transport and commercial operations (e.g. freight) should be restricted to using the airport between the hours of 0600 and 2300, and the five night-time flights (10 movements) per week should only occur between the hours of 2300 and 0600.

• The increase in noise emissions from larger jet aircraft and the increase in the number of aircraft (irrespective of this proposal) coupled with the proposed increases to the acceptability and eligibility amelioration criteria would result in a significant change in noise-level exposure to residents near the BMRA. Therefore, the EPA considers that the number of events triggering amelioration measures should be maintained for the noise levels of 75 dB(A) (>12 events per day), 80 dB(A) (>6 events per day) and 85 dB(A) (regularly exceeds).

In response to the EPA’s above position, the proponent has amendment the NMP (Busselton-Margaret River Airport Noise Management Plan (version 1, May 2018)) to reflect the above.
5. Conclusion

The EPA has considered the revised proposal by the City of Busselton to expand the BMRA to allow additional aircraft types and operator aircraft types to use the airport, and to change the hours of operation.

Consistent with relevant EPA policies and guidance, the proponent has addressed the mitigation hierarchy by identifying measures to avoid and minimise noise impacts to noise sensitive premises by:

- Capping the number of night-time flights per week to five flights (10 movements).
- Continuing to weight night-time/evening events (between 1900 and 0700 hours) four times greater than a day-time event when applying noise management measures such noise amelioration.
- Implementing noise-mitigation measures including amelioration where noise monitoring determines noise levels meet the outdoor noise criteria.
- Entering into Fly Neighbourly Agreements with commercial operators.
- Continuing to review flight path design to minimise residential overflights.

The EPA recommends that the revised proposal be implemented, but believes the proposal would have a significant residual impact on Social Surroundings. Therefore, the EPA recommends that the BRMA’s standard hours of operation for open/closed charter flights, regular passenger transport and commercial operations (e.g. freight) be between 0600 and 2300 hours, with five night-time flights per week occurring between the hours of 2300 and 0600, and that the number of events triggering noise management – including amelioration measures – be maintained to the current noise levels of 75 dB(A) (>12 events per day), 80 dB(A) (>6 events per day) and 85 dB(A) (regularly exceeds). See Appendix 5 for the EPA’s recommended conditions.

When assessing the revised proposal as a whole, the EPA considered the following:

- The impacts on the key environmental factor of Social Surroundings.
- The magnitude of predicted noise impacts from aircraft, particularly at night-time.
- The relevant EP Act principles and the EPA’s objectives for the key environmental factor.
- The EPA’s view that the impacts on the key environmental factor are manageable, provided strict restrictions are applied to the operations and the recommended conditions are imposed.

Given the above, the EPA has concluded that the revised proposal is environmentally acceptable with restrictions to some of its elements and ongoing management for:

- night-time and evening flights
- criteria for noise amelioration to noise sensitive premises,

and therefore recommends that the revised proposal be implemented subject to the conditions recommended in Appendix 5.
6. Other advice

Section 44(2a) of the EP Act provides that the EPA may include other information, advice or recommendations in its assessment report. The following advice is provided on future flight paths, which the EPA believes provides further opportunity to reduce noise impacts on urban and residential areas.

The proponent and Airservices Australia are currently reviewing flight paths, for the purpose to directing aircraft away from urban and residential areas, further minimising aircraft noise impacts. The amendments will need to be endorsed/published by Airservices Australia. While the flight paths are not mandatory, large jet aircraft are likely to use the flight paths due to their stricter operational procedures.

The EPA supports the City of Busselton’s investigations into alternative flight paths which may further minimise noise impacts to residences. Before adopting any flight paths, it is expected that the City of Busselton would undertake noise modelling of the new flight paths to show where noise emissions are likely to be distributed and that there are no new residential areas likely to be unreasonably impacted.

The EPA expects the City of Busselton, under its communication and consultation process in the NMP (2018), to consult with the community on the revised flight paths.

It is also expected that the outcome of the flight path investigations be included in the NMP three year review, as required by condition 6-2.

The City of Busselton has also begun the process of preparing a broad land use strategy and Town Planning Scheme amendment to protect future amenity for noise-sensitive land uses and the operation of the BMRA. The EPA supports the implementation of land use planning measures to prevent encroachment of residential areas in the future.
7. Recommendations

That the Minister for Environment notes:

1. That the revised proposal assessed is to amend existing airport operations involving additional aircraft types (larger jet aircraft), aircraft operator types (freight) and hours of operation.

2. The key environmental factor identified by the EPA in the course of its assessment is Social Surroundings, set out in Section 4.

3. The EPA has concluded that the revised proposal may be implemented, provided that:
   - The revised proposal is implemented in accordance with the Busselton-Margaret River Airport Noise Management Plan (version 1, May 2018).
   - The standard hours of operation for open/closed charters, regular passenger transport and commercial operators at the BMRA are restricted to between 0600 and 2300 hours.
   - The noise amelioration criteria for the number of events triggering noise amelioration action for 75 dB(A) (>12 events per day), 80 dB(A) (>6 events per day) and 85 dB(A) (regularly exceeds) is maintained as per the proponent’s NMP 2015.
   - Implementation of the revised proposal is carried out in accordance with the recommended conditions and procedures set out in Appendix 5. Matters addressed in the conditions include the implementation of the Busselton-Margaret River Airport Noise Management Plan (version 1, May 2018) that details:
     a) Objectives of the NMP.
     b) Management measures for operational activities.
     c) Fly Neighbourly Agreement.
     d) Approvals procedures for special events.
     e) Complaints process.
     f) Noise monitoring parameters.
     g) Measures for noise-affected residences.
     h) Future land use planning measures.
     i) Compliance framework.

4. The “Other Advice” provided by the EPA under Section 44(2a) of the EP Act, as set out in Section 6.
Appendix 1

List of submitters
Organisations:

Air Services Australia
Busselton Chamber of Commerce and Industry and Dunsborough Chamber of Commerce and Industry
Busselton Jetty Inc.
Civil Aviation Safety Authority
Conservation Council WA
Department of Planning, Lands and Heritage
Department of Transport
Department of Water and Environmental Regulation
Port Geographe Landowners Association Inc.
Margaret River Wine Association
Margaret River Busselton Tourism Association
Satterley Property Group

Individuals:

Ron Abbott
Lauren and Kim Aspland
Julia Avery
Natalie Bussau
Paul Berry
Michael Bowles
Tannis Brennan
Cassandra Camerer-Charlick
Stephanie and Mario Camarri
A Chapman
Carolyn Chapman
Mary Chapman
Michael Chartres
Kelvin Cook
Lucy Cook
Graeme Cotterill
Joanne Davies
Brianna Delaporte
Les Fillery
Fiona Flugge
Fre Jac French Bakery
Simone Horgan-Furlong
Boranup Gallery
Kim George
Carol Grace
Price Grey
Castledine Gregory
Julie Guthridge
Cam Haskell
Cecily Hancock
Darren Haunold
Kelly Hick
Rocky Hildred
Belinda Hopkins
Rachel House
Steven Hughes
Gary Ingram
Lee-Anne Ingram
Lee Ingram
Gary Jeisman
Clive Johnson
Damien Keenan
Naomi Kurashima
Mark Lane
Ulrika Larsson
Alan MacGregor
Tyler Mackey
John Miller
Mandy Mills
Brett Mills
Michelle Moloney
David Nicholson
Malinda Nixon
David and Sandra Noske
Julia Parkes
Michelle Radich
Julie Ramm
Geoffrey Randall
Anne Ryan
Monique Sheldon-Stemm
Toni Soares Carneiro
Brian Smith
Hayley Tobin
Kyra Tierney
Christine Tomkins
John Thomson Standish
Matthew Young
Andrew Watson
Matthew Webb
Barbara and John Wilkins

Rob Zahtila
Reto Zschokke
Jodie
Michelle
Steven

6 x anonymous submitters
Appendix 2

Consideration of principles
**EP Act Principle**

<table>
<thead>
<tr>
<th>1. The precautionary principle</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.</strong></td>
</tr>
<tr>
<td><strong>In application of this precautionary principle, decisions should be guided by:</strong></td>
</tr>
<tr>
<td>a) careful evaluation to avoid, where practicable, serious or irreversible damage to the environment; and</td>
</tr>
<tr>
<td>b) an assessment of the risk-weighted consequences of various options.</td>
</tr>
</tbody>
</table>

**Consideration**

- This principle is a relevant consideration for the EPA when assessing and considering the impacts of the proposal on the environmental factors of Social Surroundings. The assessment of these impacts is provided in this report.
- The EPA notes that the proponent has undertaken noise modelling of the impacts and identified measures to avoid or minimise impacts. The EPA has considered these measures during its assessment.
- The EPA concludes that there is no threat of serious or irreversible harm from noise emissions where restrictions to airport operations are applied. The EPA has recommended conditions to ensure measures to minimise noise impacts are undertaken by the proponent.

<table>
<thead>
<tr>
<th>2. The principle of intergenerational equity</th>
</tr>
</thead>
<tbody>
<tr>
<td>The present generation should ensure that the health, diversity and productivity of the environment is maintained and enhanced for the benefit of future generations.</td>
</tr>
</tbody>
</table>

**Consideration**

- In considering this principle, the EPA notes that Social Surroundings could be significantly impacted by the proposal. The assessment of these impacts is provided in this report.
- The proposal is an existing operation which does not require an increase in the development envelope. The proponent has proposed an amendment to the Town Planning Scheme to further restrict future noise sensitive development in the vicinity of BMRA.
- From its assessment of this proposal, the EPA has concluded that the environmental values will be protected and that the health, diversity and productivity of the environment will be maintained for the benefit of future generations.

<table>
<thead>
<tr>
<th>3. The principle of the conservation of biological diversity and ecological integrity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conservation of biological diversity and ecological integrity should be a fundamental consideration.</td>
</tr>
</tbody>
</table>

**Consideration**

- In considering this principle, the EPA notes that terrestrial fauna (waterbirds) was identified by the EPA as another environmental factor relevant to the proposal that must be addressed during the review and could be significantly impacted by the proposal.
The proponent has no power or authority to regulate activities in the airspace (such as height restrictions and flight paths). To manage this, flight training is permitted through an approvals process from the City of Busselton. In addition to other requirements, approval is based on the applicant’s commitment to observe requirements, such as the Flight Training Guidelines which state that all aircraft must fly a minimum of 640 feet (AGL) over wetlands and estuaries to avoid bird strike and disturbance of waterbird habitat.

From its assessment of this proposal the EPA has concluded that the proposal would not compromise the biological diversity and ecological integrity of the affected areas.

<table>
<thead>
<tr>
<th>4. Principles relating to improved valuation, pricing and incentive mechanisms</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Environmental factors should be included in the valuation of assets and services.</td>
</tr>
<tr>
<td>(2) The polluter pays principles – those who generate pollution and waste should bear the cost of containment, avoidance and abatement.</td>
</tr>
<tr>
<td>(3) The users of goods and services should pay prices based on the full life-cycle costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste.</td>
</tr>
<tr>
<td>(4) Environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structure, including market mechanisms, which enable those best placed to maximise benefits and/or minimise costs to develop their own solution and responses to environmental problems.</td>
</tr>
</tbody>
</table>

This principle is a relevant consideration for the EPA when assessing and considering the impacts of the proposal on the environmental factor of Social Surroundings.

In considering this principle, the EPA notes that the City of Busselton would bear the cost for monitoring requirements and noise amelioration for any affected residences in accordance with the Noise Management Plan.

The EPA has had regard to this principle during the assessment of the proposal.

<table>
<thead>
<tr>
<th>5. The principle of waste minimisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>All reasonable and practicable measures should be taken to minimise the generation of waste and its discharge into the environment.</td>
</tr>
</tbody>
</table>

In considering this principle, the EPA notes that the proponent proposes to implement the City of Busselton’s waste management procedures and practices. The EPA has had regard to this principle during the assessment of the proposal.
Appendix 3

Evaluation of other environmental factors
<table>
<thead>
<tr>
<th>Environmental factor</th>
<th>Description of the proposal's likely impacts on the environmental factor</th>
<th>Government agency and public comments</th>
<th>Evaluation of why the factor is not a key environmental factor</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LAND</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Terrestrial fauna</td>
<td>Bird-strike and disturbance to waterbirds at the Vasse-Wonnerup wetlands.</td>
<td><strong>Public submissions</strong></td>
<td>Terrestrial fauna was not identified as a preliminary key environmental factor in the ESD.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Concern is raised about impacts of 24-hour airport operations on the wetland fauna.</td>
<td>Bird-strike statistics for BMRA from 2005 to 2015 show a total of 25 recorded bird-strike incidents or an average of 2.5 bird-strikes per year (Australian Transport Safety Bureau).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Civil Aviation Safety Authority – the proponent is required to prepare, maintain, review and update a bird and animal hazard management plan.</td>
<td>Altitudes of jet aircrafts are likely to be greater than 300 m over the Vasse-Wonnerup system.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Concerns raised about the effect that the increased aircraft activity and noise would have on cattle and kangaroo populations.</td>
<td>Small number of observations indicate that waterbirds are disturbed occasionally, but disturbances were short term and of low intensity.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Adequacy of fauna survey.</td>
<td>LA_{\text{max}} noise level over the Wonnerup Estuary is likely to be 78 dB(A) for the B737 which is within the 85 dB(A) limit suggested by literature.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Having regard to:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- the small number of bird-strikes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- noise levels over the Wonnerup</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- the significance considerations in the Statement of Environmental Principles, Factors and Objectives,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>the EPA considers it is unlikely that the proposal would have a significant impact on terrestrial fauna and can be managed to meet the EPA's environmental objective.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Accordingly, the EPA does not consider terrestrial fauna to be a key environmental factor at the conclusion of its assessment.</td>
</tr>
</tbody>
</table>
Appendix 4

Proposed changes to conditions for revised proposal
Proposed Implementation Agreement (Ministerial Statement)

The EPA recommends that the proposal may be implemented and further recommends that the implementation of the proposal be subject to the Implementation Agreement (Ministerial Statement) set out in Appendix 5.

The recommended Ministerial Statement has been developed in accordance with the Environmental Impact Assessment (Part IV Divisions 1 and 2) Procedures Manual 2016 and includes a review of the following implementation conditions:

- Ministerial Statement 901: Busselton Regional Aerodrome City of Busselton, issued on 22 June 2012.
- Ministerial Statement 1009: Busselton Regional Aerodrome, issued on 7 July 2015.

Proposed changes

The main changes between the proposed new Ministerial Statement (Appendix 5) and the existing Ministerial Statements relate to the updating of the 2015 Noise Management Plan to the 2018 Busselton-Margaret River Airport Noise Management Plan 2018 (version 1, May 2018) which:

- Facilitates large jet aircraft to use BMRA.
- Allows additional operators to use BMRA (freight).
- Allows five night-time flights (10 movements) per week.
- Amends the standard hours of operation for light and general aviation.
- Amends some of the criteria for noise acceptability and noise amelioration measures.

Recommended environmental conditions

The EPA notes the following:

- Condition 5 of the recommended conditions requires the proponent to implement the Busselton-Margaret River Airport Noise Management Plan 2018 (version 1, May 2018).
- Condition 6 of the recommended conditions requires the proponent to review the effectiveness of the Busselton-Margaret River Airport Noise Management Plan 2018 (version 1, May 2018).
Appendix 5

Identified decision-making authorities and recommended environmental conditions
Identified decision-making authorities

Section 44(2) of EP Act specifies that the EPA’s report must set out (if it recommends that implementation be allowed) the conditions and procedures, if any, to which implementation should be subject. This Appendix contains the EPA’s recommended conditions and procedures.

Section 45(1) requires the Minister for Environment to consult with decision-making authorities, and if possible, agree on whether or not the proposal may be implemented, and if so, to what conditions and procedures, if any, that implementation should be subject.

The Minister for Environment under the EP Act is the decision-making authority for this proposal.
Statement No. XXX

RECOMMENDED ENVIRONMENTAL CONDITIONS

STATEMENT THAT A REVISED PROPOSAL MAY BE IMPLEMENTED
(Environmental Protection Act 1986)

BUSSELTON MARGARET RIVER AIRPORT EXPANSION

Proposal: Proposal to amend Busselton Regional Aerodrome the subject of Statement Numbers 901 dated 22 June 2012 and 1009 dated 7 July 2015.

Proponent: City of Busselton
Australian Business Number 87 285 608 991

Proponent Address: 2 Southern Drive
BUSSELTON WA 6280

Assessment Number: 2105

Report of the Environmental Protection Authority: 1616

Previous Assessment Number: 2008, 1876, 1918, 1913, 1867, 1827 and 775

Previous Report of the Environmental Protection Authority: 1546, 1435, 1428, 1418, 1385, 1348 and 785

Previous Statement Number: 1009, 901, 887, 878, 856, 825 and 399

Pursuant to section 45, read with section 45B of the EP Act, it has been agreed that:

1. the revised proposal described and documented in Schedule 1 may be implemented;

2. this Statement supersedes Statement Numbers 901 and 1009, and from the date of this Statement each of the implementation conditions in Statements 901 and 1009 no longer apply in relation to the revised proposal; and

3. the implementation of the revised proposal, is subject to the following revised implementation conditions:
1 Proposal Implementation

1-1 When implementing the Revised Proposal, the proponent shall not exceed the authorised extent of the Revised Proposal as defined in Table 2 in Schedule 1.

2 Contact Details

2-1 The proponent shall notify the CEO of any change of its name, physical address or postal address for the serving of notices or other correspondence within twenty eight (28) days of such change. Where the proponent is a corporation or an association of persons, whether incorporated or not, the postal address is that of the principal place of business or of the principal office in the State.

3 Compliance Reporting

3-1 The proponent shall prepare, and maintain a Compliance Assessment Plan which is submitted to the CEO at least six (6) months prior to the first Compliance Assessment Report required by condition 3-6.

3-2 The Compliance Assessment Plan shall indicate:

(1) the frequency of compliance reporting;
(2) the approach and timing of compliance assessments;
(3) the retention of compliance assessments;
(4) the method of reporting of potential non-compliances and corrective actions taken;
(5) the table of contents of Compliance Assessment Reports; and
(6) public availability of Compliance Assessment Reports.

3-3 After receiving notice in writing from the CEO that the Compliance Assessment Plan satisfies the requirements of condition 3-2 the proponent shall assess compliance with conditions in accordance with the Compliance Assessment Plan required by condition 3-1.

3-4 The proponent shall retain reports of all compliance assessments described in the Compliance Assessment Plan required by condition 3-1 and shall make those reports available when requested by the CEO.

3-5 The proponent shall advise the CEO of any potential non-compliance within seven (7) days of that non-compliance being known or suspected.

3-6 The proponent shall submit to the CEO the first Compliance Assessment Report fifteen (15) months from the date of issue of this Statement addressing the twelve (12) month period from the date of issue of this Statement and then annually from the date of submission of the first Compliance Assessment Report, or as otherwise agreed in writing by the CEO.
The Compliance Assessment Report shall:

1. be endorsed by the proponent’s Chief Executive Officer or a person delegated to sign on the Chief Executive Officer’s behalf;

2. include a statement as to whether the proponent has complied with the conditions;

3. identify all potential non-compliances and describe corrective and preventative actions taken;

4. be made publicly available in accordance with the approved Compliance Assessment Plan; and

5. indicate any proposed changes to the Compliance Assessment Plan required by condition 3-1.

4 Public Availability of Data

4-1 Subject to condition 4-2, within a reasonable time period approved by the CEO of the issue of this Statement and for the remainder of the life of the proposal the proponent shall make publicly available, in a manner approved by the CEO, all validated environmental data (including sampling design, sampling methodologies, empirical data and derived information products (e.g. maps)), environmental management plans and reports relevant to the assessment of this proposal and implementation of this Statement.

4-2 If any data referred to in condition 4-1 contains particulars of:

   1. a secret formula or process; or
   2. confidential commercially sensitive information,

the proponent may submit a request for approval from the CEO to not make these data publicly available. In making such a request the proponent shall provide the CEO with an explanation and reasons why the data should not be made publicly available.

5 Noise Management Plan

5-1 The proponent shall manage the operation of the proposal to meet the following environmental objective:

   1. noise emissions from the ongoing operation of the proposal shall be managed so as not to unreasonably impact on noise sensitive premises.

5-2 In order to meet the requirements of condition 5-1, the proponent shall implement the Busselton-Margaret River Airport Noise Management Plan 2018 (version 1, May 2018).
5-3 The proponent shall implement the most recent version of the *Busselton-Margaret River Airport Noise Management Plan 2018* which the CEO has confirmed by notice in writing, addresses the requirements of condition 5-1.

5-4 The proponent shall continue to implement the *Busselton-Margaret River Airport Noise Management Plan 2018* (version 1, May 2018), or any subsequent revisions as approved by the CEO in condition 5-3, until the CEO has confirmed by notice in writing that the proponent has demonstrated that the objective in condition 5-1 is being and will continue to be met and therefore the implementation of the management plan is no longer required.

5-5 In the event of failure to implement management actions detailed in the Plan, the proponent shall meet the requirements of condition 3-5 (Compliance Reporting) and shall implement the measures outlined in the Plan, including, but not limited to, actions and investigations to be undertaken.

6 **Review of Noise Management Plan**

6-1 Within three months of each three-year period, from the date of issue of this Statement, the proponent shall submit a report to the CEO which reviews the effectiveness of the *Busselton-Margaret River Airport Noise Management Plan 2018* (version 1, May 2018), or any subsequently approved revisions, in achieving the objective of condition 5-1.

6-2 The report required by condition 6-1 shall include, but not be limited to:

1. Noise monitoring results;
2. Noise amelioration assessments and/or implementation;
3. Number of complaints received and actions taken to resolve complaints;
4. Published flight paths to minimise impacts;
5. The findings of the review to determine the effectiveness of the *Busselton-Margaret River Airport Noise Management Plan 2018* (version 1, May 2018), or any subsequently approved revisions, and whether amendments to the Plan are required.
Table 1: Summary of the Proposal

<table>
<thead>
<tr>
<th>Proposal Title</th>
<th>Busselton-Margaret River Airport Expansion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short Description</td>
<td>The proposal is to operate a regional airport at 86 Neville Hyder Drive, Yalyalup.</td>
</tr>
</tbody>
</table>

Table 2: Location and authorised extent of physical and operational elements

<table>
<thead>
<tr>
<th>Element</th>
<th>Location</th>
<th>Authorised Extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airport</td>
<td>Figure 1</td>
<td>Airport infrastructure not to extend outside the 206.2 ha proposal development envelope as shown in Figure 1.</td>
</tr>
<tr>
<td>Runway Heading</td>
<td>Figure 1</td>
<td>030°/210°</td>
</tr>
</tbody>
</table>

Table 3: Abbreviations and Definitions

<table>
<thead>
<tr>
<th>Acronym or Abbreviation</th>
<th>Definition or Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEO</td>
<td>The Chief Executive Officer of the Department of the Public Service of the State responsible for the administration of section 48 of the Environmental Protection Act 1986, or his delegate.</td>
</tr>
<tr>
<td>EP Act</td>
<td>Environmental Protection Act 1986</td>
</tr>
<tr>
<td>Ha</td>
<td>Hectare</td>
</tr>
<tr>
<td>noise sensitive premises</td>
<td>A building, or a part of a building, on the premises that is used for a noise sensitive purpose, in accordance with those premises defined in Schedule 1 Part C of the Environmental Protection (Noise) Regulations 1997.</td>
</tr>
</tbody>
</table>

Figures (attached)

Figure 1  Busselton-Margaret River Airport location and development envelope.
Figure 1  Busselton-Margaret River Airport location and development envelope
Schedule 2

Coordinates defining the Busselton-Margaret River Airport development envelope as shown in Figure 1 are held by the Department of Water and Environmental Regulation, document reference number 2018-1521079909791 (dated 15 March 2018).
Appendix 6

References
References


Bamford Consulting Ecologists 2016, Assessment of the risk of disturbance to waterbirds of the Vasse-Wonnerup wetlands from the proposed expansion of the Busselton-Margaret River Regional Airport. Prepared for the City of Busselton, Perth, WA.

City of Busselton 2012, Busselton Regional Airport Noise Management Plan – effective 22 June 2012, Busselton, WA.

City of Busselton 2015, Busselton Regional Airport Noise Management Plan – effective 7 July 2015, Busselton, WA.

City of Busselton 2017, Busselton-Margaret River Airport Noise Management Plan 2017, Busselton, WA.


City of Busselton 2018b, City of Busselton – Busselton Margaret River Airport Expansion – Assessment 2105: Response to submissions, Busselton, WA.

EPA 2016, Environmental factor guideline – Social Surroundings, Environmental Protection Authority, Perth, WA.


Strategen 2017, Busselton-Margaret River Airport Expansion – Assessment no. 2105 Environmental Review Document. Prepared for the City of Busselton, Perth WA.

Western Australian Planning Commission 2015, State Planning Policy 5.1 Land use planning in the vicinity of Perth Airport, Perth, WA.