Busselton-Margaret River Regional Airport Development Project

FLYING INTO THE FUTURE

THIS PROJECT IS FUNDED BY

Department of Regional Development
Department of Transport

ROYALTIES FOR REGIONS

City of Busselton
Geographic Bay

SOUTH WEST DEVELOPMENT COMMISSION
Flying into the future

You may be aware that the City of Busselton is upgrading the existing Airport facilities in preparation for Regular Public Transport (RPT) air services to interstate destinations such as Melbourne and Sydney.

This development includes:

• lengthening, widening and strengthening of the runway to facilitate B737/A320 jet aircraft operations;
• construction of two new apron parking bays and connecting taxi-way;
• a new terminal building;
• a new car park to accommodate an additional 600 parking bays; and
• connection to essential services and undergrounding of overhead powerlines.

The Airport is regarded as playing a fundamental role in the future social and economic growth of the region and State. Construction is expected to commence late 2016 and take approximately 24 months to complete.
Connecting the South West

The Busselton-Margaret River Regional Airport is regarded as the most strategically located in the South West region, having the right physical characteristics, central location, proximity to the ‘Margaret River Region’ and lack of development impediment to make it the ideal South West Regional Airport facility.

The development of airport facilities will support flights by narrow body aircraft such as Boeing 737-800 (B737) and Airbus 320 (A320), capable of interstate flights carrying up to 180 passengers. The interstate services will be Regular Public Transport (RPT) which means anyone can purchase tickets for the flights.

The number and timing of new interstate flights per week has not been decided and will be determined by negotiation with commercial airlines. In order to attract commercial interstate airlines the City is proposing that aircraft are able to operate within the parameters of the updated draft 2016 Noise Management Plan. It is anticipated that there will be approximately three interstate flights per week on completion of airport development in 2018 (see table below).

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<th>Year</th>
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* based on KPMG route viability/demand study and SWDC business case and subject to negotiation with airlines and ongoing public demand.

Precinct key plan
1. Aviation Business Park
2. Aviation Operations Precinct
3. Terminal Precinct
4. Aviation Logistics Precinct
5. Light Aviation Precinct
6. Helicopter Operations Precinct
Positioning the South West for take off

The project will provide the South West region and the State with transport accessibility and connectivity to facilitate the movement of people and air freight opportunities that will drive employment, income, population, and wider economic growth.

The development will meet the needs of the South West region for at least the next 20 years and encourage a strong local economy that is connected with the broader world.

The development of the Busselton-Margaret River Regional Airport will contribute to the sustainable economic and social growth of Western Australia, particularly the South West region, in a number of key ways namely:

- The airport development offers opportunities as an air freight distribution centre. Freight of regional produce could occur from the Busselton-Margaret River Regional Airport.
- Opportunity for local industry diversification and development including aviation related industry and related businesses with skilled workforces.
- The opportunity to deliver more tourists to the entire South West region to bolster the tourism industry, including occupancy increases, event attendance and incentive to invest in further development of major tourism infrastructure.

“The Busselton-Margaret River Regional Airport will enable future potential for economic development.”
Getting ready to take off!

Aircraft fly within a corridor known as a flight path, rather than along a precise, straight line. Over time, as navigation technology has improved, these corridors have generally been getting narrower. Factors such as aircraft type, weight, and weather conditions can also determine how precisely aircraft fly within corridors.

Where aircraft fly also depends on the classification of airspace. The Busselton-Margaret River Regional Airport is classified as G airspace. This means that the aircraft pilot selects the optimum arrival and departure flight path for safety and efficiency.

Aircraft take off and land into the wind, or with a minimal tail wind. The procedures for departing aircraft are designed to take a number of factors into account, including safety and noise impacts.

Arriving aircraft must be stabilised and aligned with the runway at least three to four kilometers from the runway end. In bad weather this increases to 15 kilometers. Due to the more gradual descent, arriving aircraft are at a lower altitude and so the areas beneath the arrival flight paths will always be subject to the highest noise levels beyond the immediate vicinity of the airport.

B737 and A320 aircraft typically land using a very similar landing approach which is gradual and take off with a steeper departure path. The graph below shows the altitude of aircraft using typical arrival and departure flight paths to the runway.

**Typical altitudes for arrivals and departures to the North-East**

![Graph showing typical altitudes for arrivals and departures to the North-East.](image)
How we manage noise

Aircraft noise will always arise as part of an airport’s operation, and while modern aircraft are becoming quieter, considerable ongoing attention is required to manage the noise associated with an airport.

The City of Busselton is committed to ensuring that the development takes into account the potential amenity and therefore lifestyle impacts that the operations at the airport may have on certain residences within its vicinity. The City’s Noise Management Plan provides the basis for recognising the International Civil Aviation Organisation’s (ICAO) principle of a balanced approach to aircraft management.

This consists of identifying the noise impacts at an airport and analysing the various measures available to reduce noise and noise impacts through:

- restricting maximum aircraft noise emission;
- reduction of noise source – aircraft built today are required to meet certain noise certification standards implemented by the Council of ICAO;
- land use planning management;
- operational noise abatement procedures;

The Noise Management Plan is being updated as part of the development project and is available for public review and comment on the website from February 2016.

“ The development will meet the needs of the South West region for the next 20 years and encourage a strong local economy that is connected with the broader world. ”
Shhh…. Fly Neighbourly Agreement

While aircraft flight paths and aircraft noise created by aviation movements is primarily the responsibility of Airservices Australia, the City of Busselton takes a proactive approach to noise impacts on the community through the Airport’s Noise Management Plan, which includes Fly Neighbourly Principles.

The Fly Neighbourly Agreement is a code of practice that the City of Busselton requests all Airport users observe to assist with the minimisation of aircraft noise experienced by the Airport’s neighbours. To read the Fly Neighbourly Principles in full visit the Busselton-Margaret River Regional Airport website at www.busseltonmargaretriverairport.com.au.

What’s that sound?

Sound is pressure variations travelling through the air from the source to the receiver, usually the human ear. The pressure variations are due to air vibrating back and forth. These variations (or sound waves) travel through the air as a wave.

Sound is measured on a logarithmic scale with the decibel (dB) as the unit of measure. The sound level of typical daytime activities can vary between 30dB and 85dB. The sound levels of a food blender is typically around 88dB and a vacuum cleaner 70dB. The Airport’s Noise Management Plan specifies that the maximum sound level of an aircraft utilising the Airport is 85dB.

The City of Busselton has undertaken extensive noise modelling for B737 and A320 aircraft based on aircraft noise emission data, existing flight paths, weather conditions and ground elevations to determine the typical aircraft noise that may be experienced by Airport neighbours. The City is undertaking consultation with these property owners to discuss any concerns that may arise as a result of future operations. The modelled noise contours are available for review through a request to the City – contact details can be found on the back cover.

Aircraft noise is very different from the noise created by railways or busy roads. The key difference is that aircraft noise is intermittent, with no noise for most of the time, then rising to a peak level as the aircraft flies nearby, then falling back again to background levels. Aircraft noise also affects a wider area, as flight paths can vary, and as the aircraft emit noise at altitude the noise cannot be shielded with barriers as are typically used for busy roads.

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<thead>
<tr>
<th>Source</th>
<th>Sound Level</th>
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<tr>
<td>Dishwasher</td>
<td>55dB</td>
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<tr>
<td>Aircraft</td>
<td>max 85dB¹</td>
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<tr>
<td>Passenger car</td>
<td>70dB²</td>
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<tr>
<td>Diesel truck</td>
<td>95dB²</td>
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<tr>
<td>Conversation</td>
<td>60-85dB</td>
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<tr>
<td>Construction site</td>
<td>90dB</td>
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<tr>
<td>Telephone dial tone</td>
<td>70dB</td>
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<tr>
<td>Emergency siren</td>
<td>95dB</td>
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</table>

¹ Maximum 85dB at Busselton-Margaret River Regional Airport
² 60km per hour at 7m distance
³ 40km per hour at 7m distance
### Community Engagement

The City of Busselton has appointed a dedicated Airport Project Team including a Stakeholder Engagement and Communication Officer to ensure that the community are kept well informed of the Busselton-Margaret River Regional Airport Project progress.

Over the last month the City has contacted key community stakeholders to ensure that they are aware of and have accurate information about the project and provide them with the opportunity to speak directly with project staff.

Over the coming months there will be more community engagement including opportunities for the broader public to attend information sessions to learn about the project.

### STAY IN THE LOOP

**New Busselton-Margaret River Regional Airport website**

www.busseltonmargaretriverairport.com.au

**Fact Sheet**

www.busseltonmargaretriverairport.com.au

**Email:**

AirportProject@Busselton.wa.gov.au

and join the mailing list and receive project updates

**Email questions or comments to**

AirportProject@Busselton.wa.gov.au
Where is the airport?
The Busselton-Margaret River Regional Airport (BMRRA) is located 6.5 kilometres South East from the city centre of Busselton, off the Vasse Highway.

What is the BMRRA Development Project?
The BMRRA Development Project is the construction of infrastructure that is essential for interstate Regular Public Transport (RPT) air services and includes:
• lengthening, widening and strengthening of the runway to facilitate B737 and A320 jet aircraft;
• construction of two new apron parking bays and connecting taxi way;
• new car park to accommodate an additional 600 long term parking bays;
• new terminal building; and
• connection to essential services and undergrounding of overhead powerlines.

Why is the BMRRA being developed?
Regional airports play a fundamental role in serving both their local communities and the Australian economy more broadly. It is essential to upgrade airport facilities to ensure the BMRRA meet the social and economic needs of the region well into the future.

How is the project being funded?
The $59.7 million development project is made possible by $45.9 million from the State Government’s Royalties for Regions program, $10 million from the Department of Transport’s Regional Airports Development Scheme (RADS), $3.5 million from the City of Busselton and $300,000 from the South West Development Commission.

When will construction start?
Construction is expected to commence in the last quarter of 2016.

When will the project be finished?
The project should be finished in 2018.

Why was the Airport renamed?
A condition of State Government funding was that the Airport be renamed to include ‘Margaret River’ due to the interstate and international recognition of the Margaret River name. The announcement by the State Government to name the Airport Busselton-Margaret River Regional Airport is in accordance with a Council recommendation.
Busselton-Margaret River Regional Airport

Understanding Aircraft Noise
Today’s Agenda:

• Busselton Airport background

• Busselton-Margaret River Regional Airport Project Scope

• Understanding aircraft noise

• Noise modelling

• How we manage noise
Airport Terminal - 2015
Busselton-Margaret River Regional Airport Location
The development includes:

- Lengthening, widening & strengthening of the runway to facilitate B737/A320 jet aircraft operations;
- Construction of two apron parking bays & connecting taxi-way;
- A new terminal building;
- A new car park – additional 600 parking bays;
- Connection to essential services
Moving aircraft cause air around it to become compressed, causing noise waves.

Aircraft noise increases when landing gear & flaps have been deployed, making aircraft less aerodynamic.

Large fans at front of an engine & from the jet exhaust & propellers also cause noise waves.

As air gets compressed it reverberates against the aircraft’s surface & makes noise.
Understanding Aircraft Noise

- Aircraft are loudest at take-off.

- The further away an aircraft is from the ground, the quieter it will be.

- Aircraft noise may become more noticeable as aircraft change engine thrust, similar to a motor vehicle accelerating.

- Aircraft noise is from the noise created by railways or traffic because it is intermittent.

- Humidity, air density & cloud cover influence how aircraft noise behaves.

- As aircraft noise waves travel, they lose energy & the higher frequency noise is absorbed by the atmosphere.
Useful websites

www.aircraftnoise.com.au

www.airservicesaustralia.com

Coming soon

www.busseltonmargaretriverairport.com.au
Australian Noise Exposure Concept (ANEC)

ANEC noise contours are a planning tool used to test changes to noise exposure resulting from proposed changes to airport operations.
Flight Paths

Aircraft fly within a corridor known as a flight path. B737 and A320 aircraft typically land using a very similar approach and take off with a steeper departure path.

Typical altitudes for arrivals and departures to the North-East

![Graph showing typical altitudes for arrivals and departures to the North-East.](image-url)
Runway Usage Tracks

Based on the arrival, departures & circuit tracks assigned for each runway end.

**Usage**

- Runway 03  40%
- Runway 21  60%
Runway 21 flight tracks
Estimated number of flights per week*

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* based on KPMG route viability/demand study and SWDC business case and subject to negotiation with airlines and ongoing public demand.
How we manage aircraft noise

The City of Busselton has developed a plan to document the noise management initiatives that are currently being undertaken at Busselton-Margaret River Regional Airport. These include:

• Restricting maximum aircraft noise emission;
• Reduction of noise source – aircraft built today are required to meet certain noise certification standards implemented by the Council of ICAO;
• Land use planning management;
• Operational noise abatement procedures;

The Noise Management Plan specifies that the maximum outdoor aircraft noise level is 85dB(A) at any residential property.

The Noise Management Plan is being updated as part of the development project & is available for public review & comment on the City’s & Airport website.
Thank you for attending.

Further questions:

AirportProject@Busselton.wa.gov.au