

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



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).



Boeing 737-800



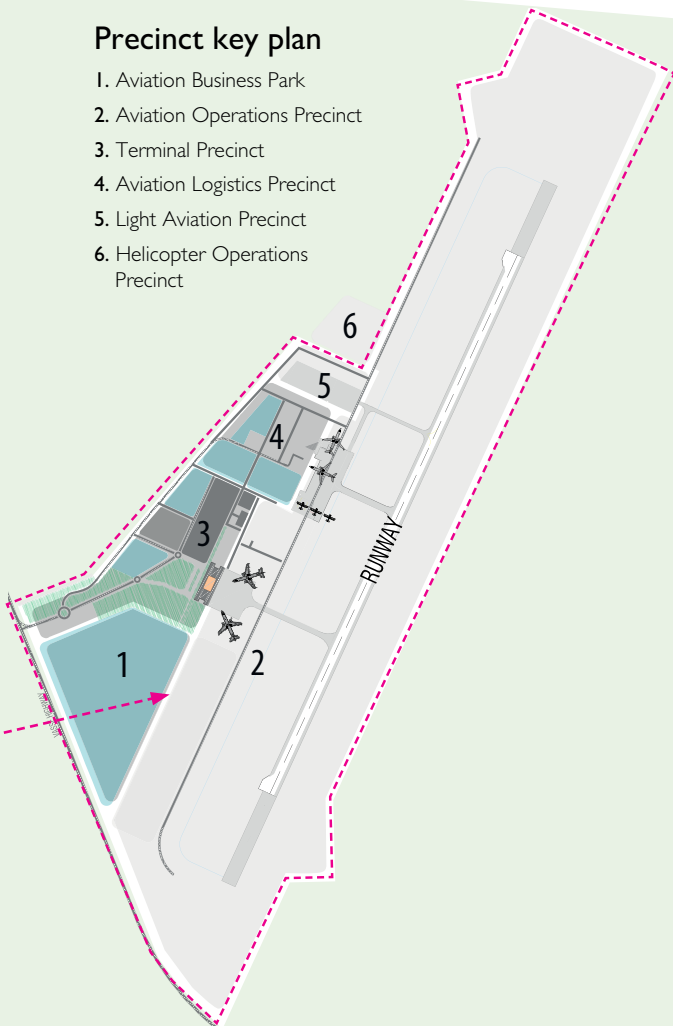
Airbus A320



Fokker 100

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



Estimated number of interstate flights per week*



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



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.

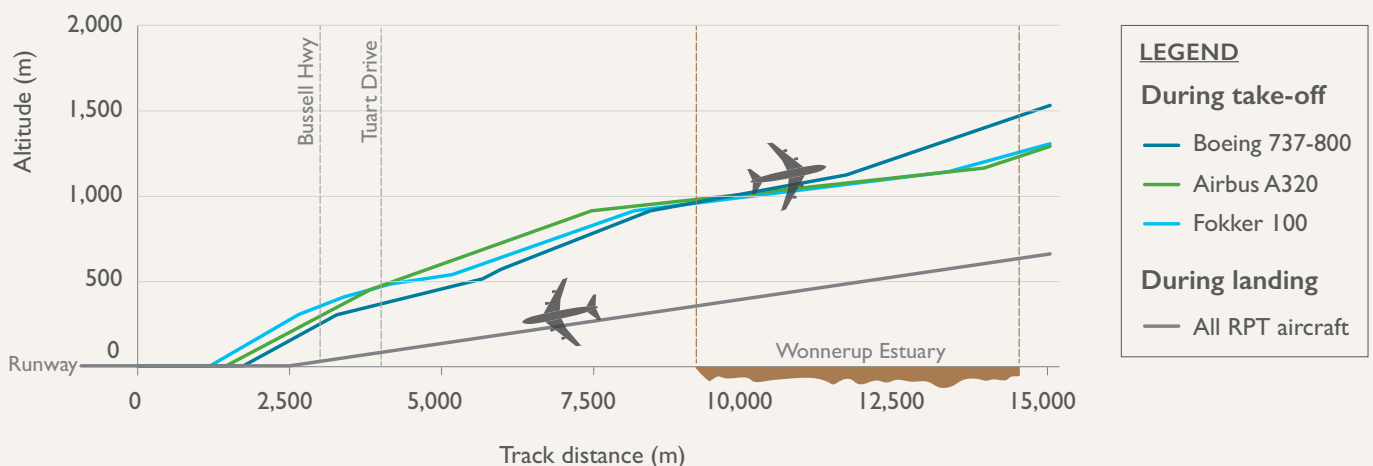
Where aircraft fly also depends on the classification of airspace. The Busselton-Margaret River Regional Airport is classified as G airspace. This means that the aircraft pilot selects the optimum arrival and departure flight path for safety and efficiency.

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



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;
- noise amelioration process that meets Australian Standard AS2021:2015.

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.



Dishwasher
55dB



Aircraft
max 85dB¹



Passenger car
70dB²



Diesel truck
95dB³



Conversation
60-85dB



Construction site
90dB



Telephone dial tone
70dB



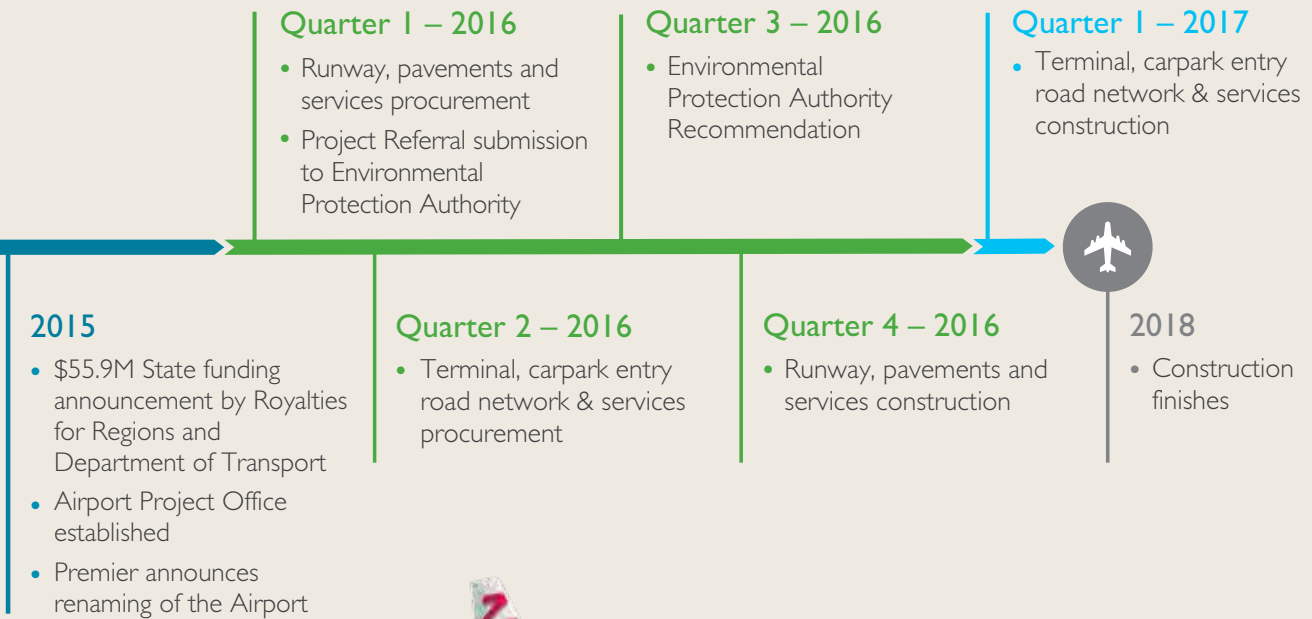
Emergency siren
95dB

¹ Maximum 85dB at Busselton-Margaret River Regional Airport

² 60km per hour at 7m distance

³ 40km per hour at 7m distance

PROJECT MILESTONE



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



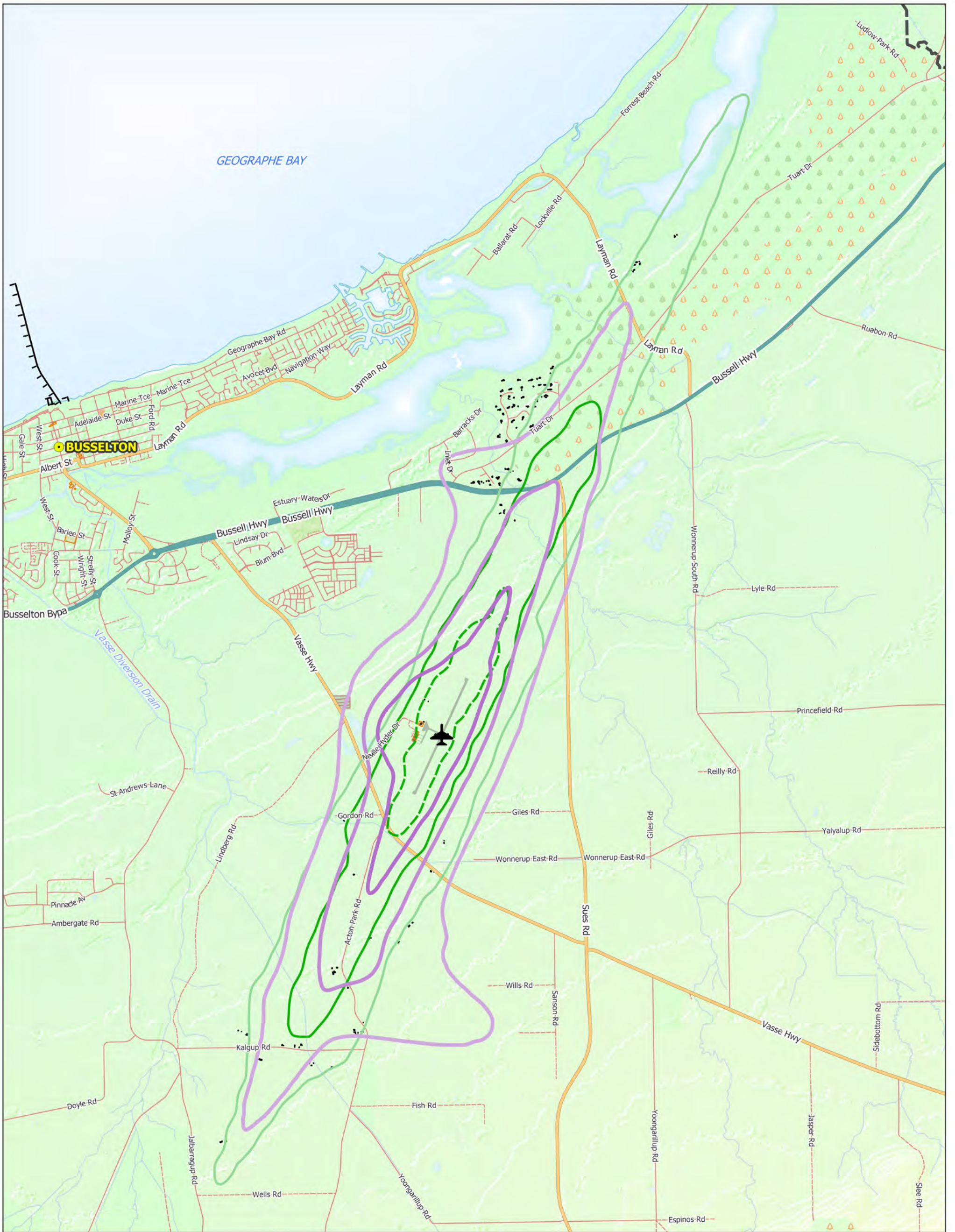
Fact Sheet
www.busseltonmargaretriverairport.com.au



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



ANEC Existing Infrastructure		ANEC Expanded Infrastructure	
	ANEC 10		ANEC 5
	ANEC 15		ANEC 10
	ANEC 20		ANEC 20
	Airport		City Boundary
	Cadastre		Reserve
			National Park

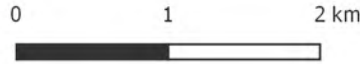
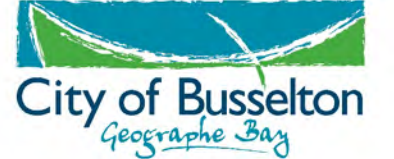
Busselton-Margaret River Airport

ANEC 2034/2035 Current

ANEC 2038/2039 Proposed

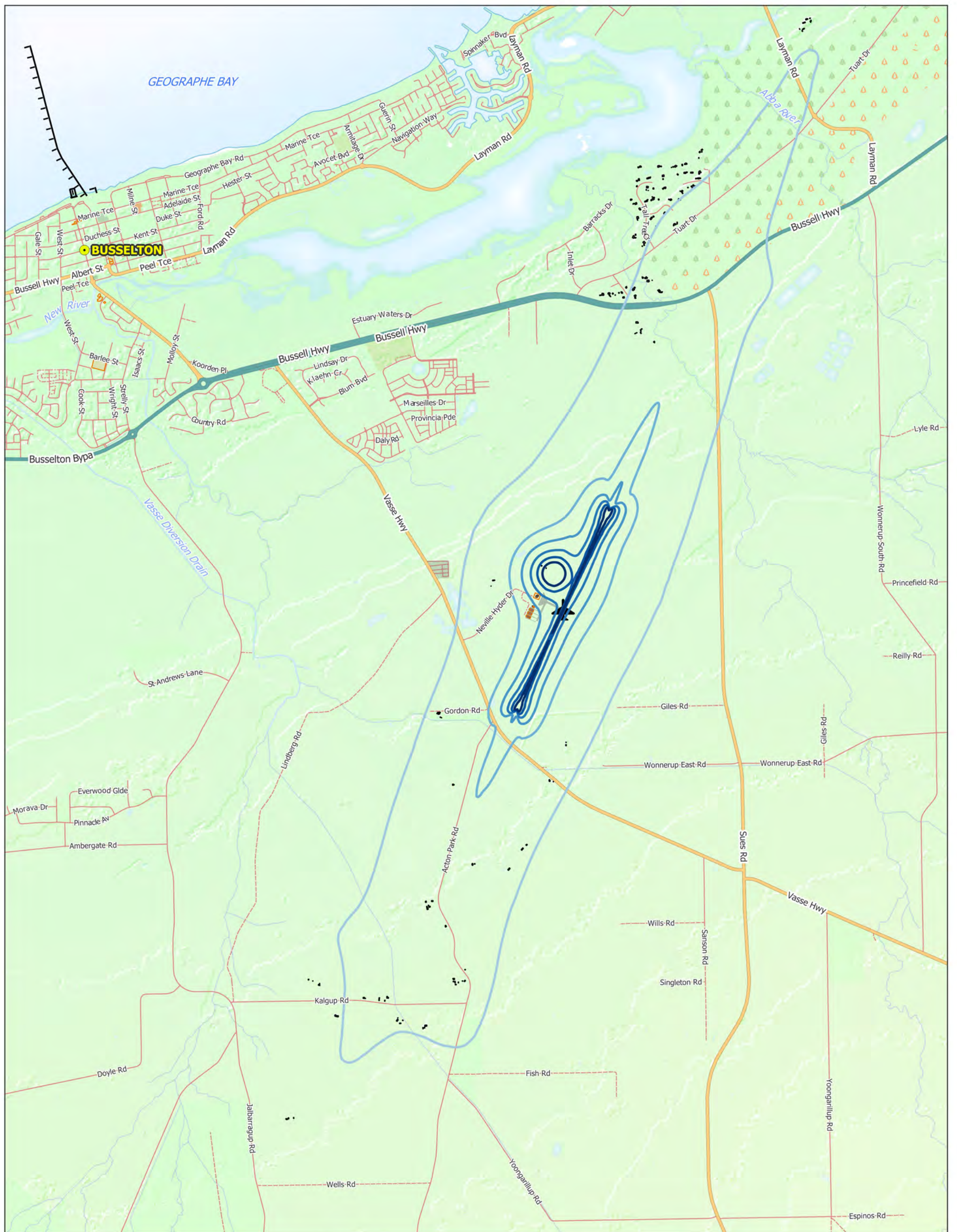
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Map Produced on 17/6/2016
 GIS Section, City of Busselton



Scale at A3 - 1:50,000

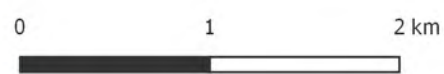




ANEC Expanded Infrastructure

- | | | |
|---------|---------|---------------|
| ANEC 10 | ANEC 30 | Airport |
| ANEC 20 | ANEC 35 | City Boundary |
| ANEC 25 | ANEC 40 | Cadastre |
| | | Reserve |
| | | National Park |
| | | Building |

**Busselton-Margaret River Airport
ANEC 2038/39**



Scale at A3 - 1:40,000



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- Airport Area
- Main Road
- Sealed Local Road
- Unsealed Local Road
- Cadastre

Busselton Margaret River Airport Area



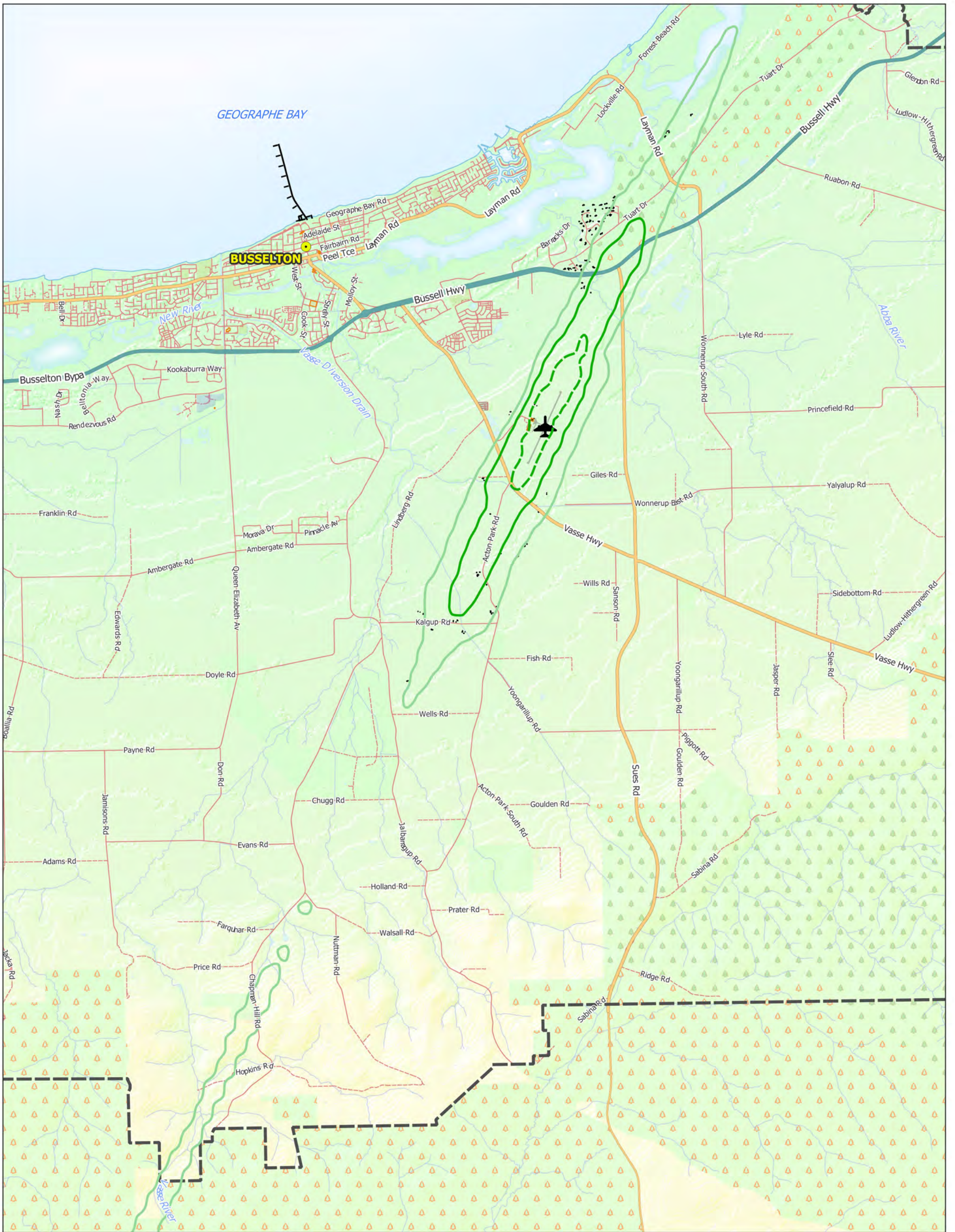
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N70 Expanded Infrastructure

- 20 Events
- 10 Events
- 5 Events

- Airport
- City Boundary
- Cadastral Reserve
- National Park
- Building

Busselton-Margaret River Airport N70 2038/39

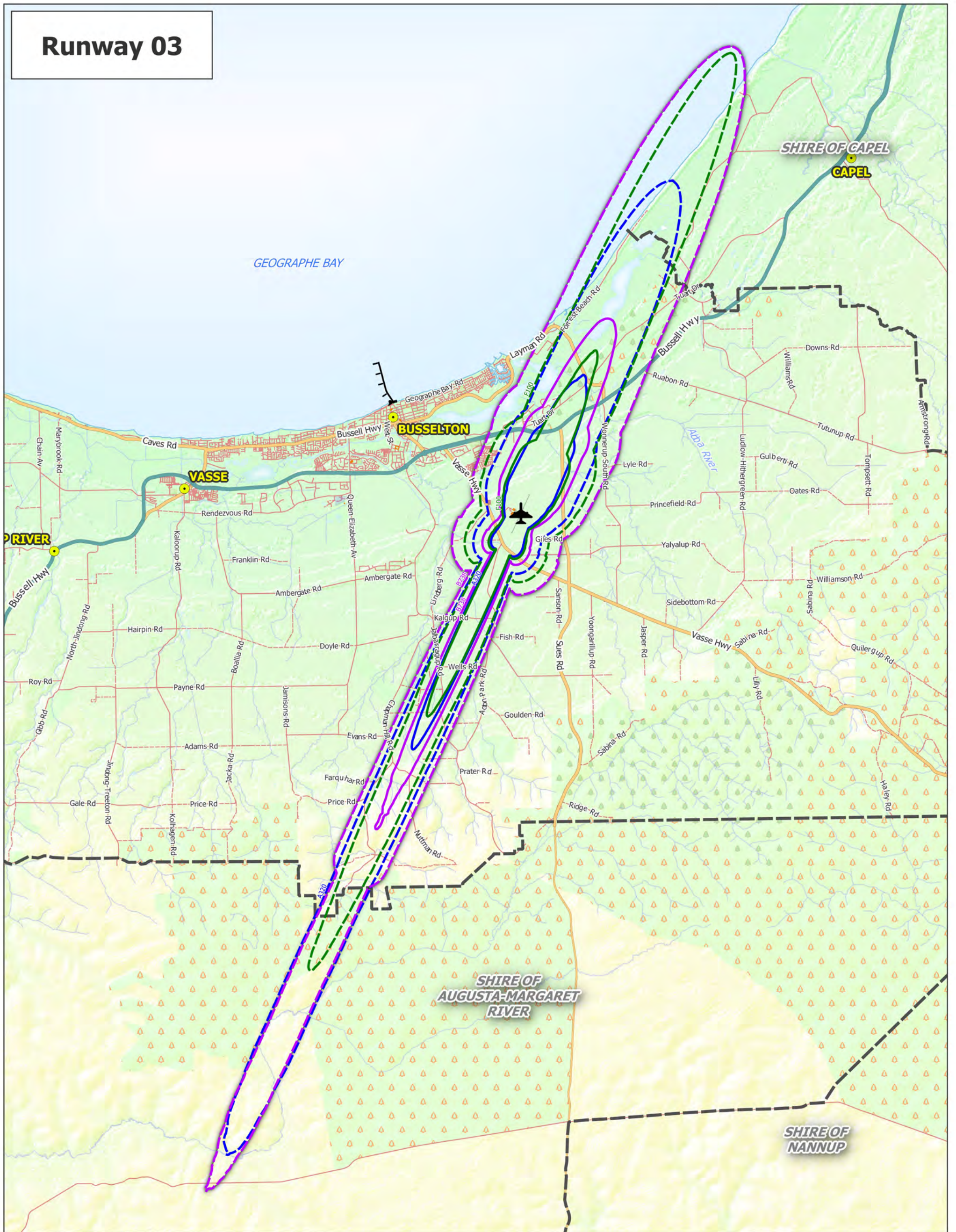


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Runway 03



F100	B738	A320
LAMAX 60	LAMAX 60	LAMAX 60
LAMAX 70	LAMAX 70	LAMAX 70
Airport	Cadastre	
City Boundary	Reserve	
	National Park	

Busselton-Margaret River Airport Noise By Aircraft Type

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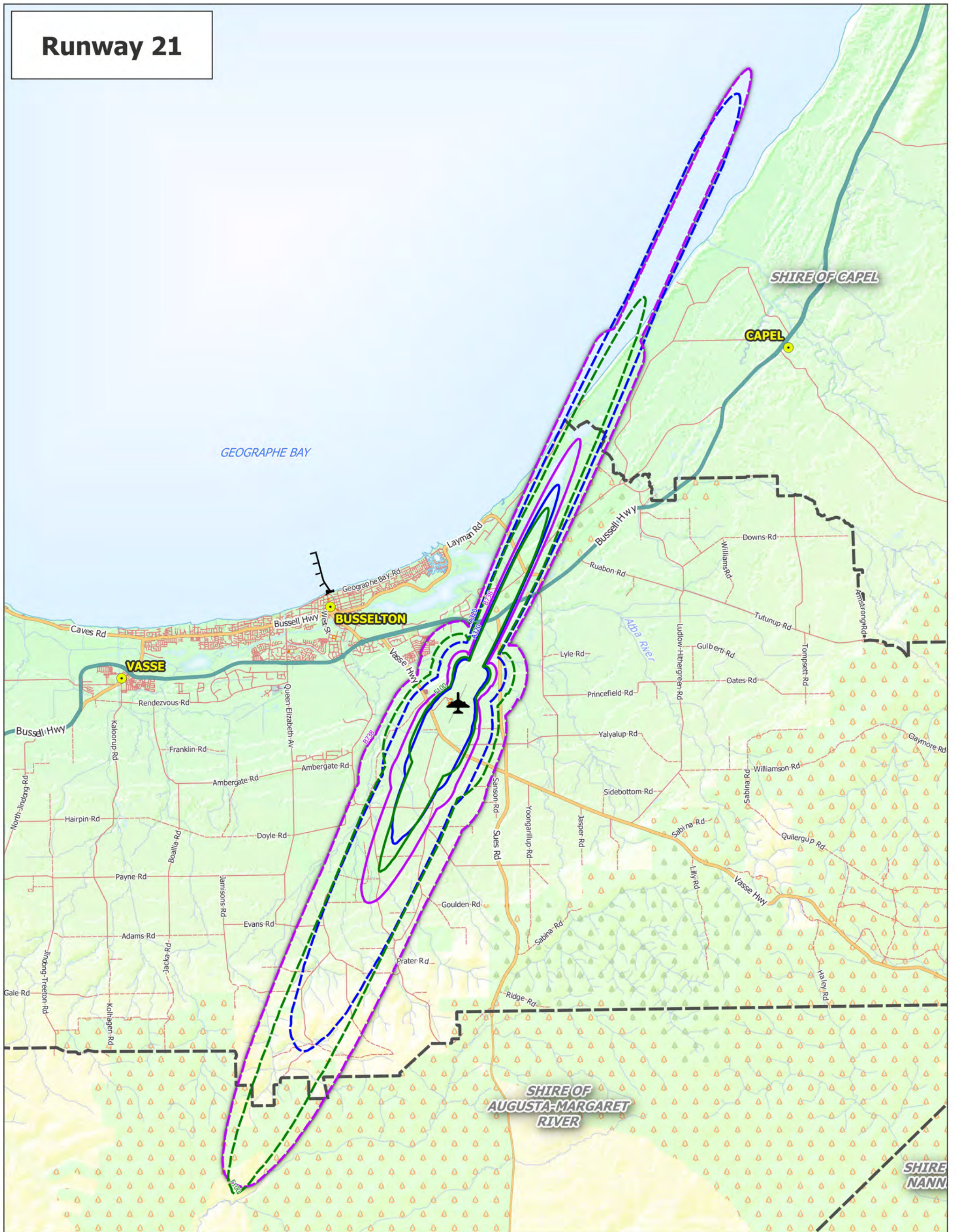
0 1 2 3 4 km



Scale at A3 - 1:150,000



Runway 21



F100	B738	A320
LAMAX 60	LAMAX 60	LAMAX 60
LAMAX 70	LAMAX 70	LAMAX 70

- Airport
- City Boundary
- Cadastre
- Reserve
- National Park

Busselton-Margaret River Airport Noise By Aircraft Type

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0 1 2 3 4 km



Scale at A3 - 1:150,000





Busselton-Margaret River Regional Airport Project

FACTSHEET

Where is the airport?

The Busselton-Margaret River Regional Airport (BMRRR) is located 6.5 kilometres South East from the city centre of Busselton, off the Vasse Highway.

What is the BMRRR Development Project?

The BMRRR 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 BMRRR 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 BMRRR 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.

Why was the BMRRR selected for development?

The BMRRR is regarded as the most strategically located of all the airports in the South West Region, having the right physical characteristics, central location and lack of development impediments. The Development Project aligns with Key Goal Area 4 in the City of Busselton's Strategic Community Plan (2013): A well connected City that provides for safe, accessible and efficient transport and communication systems to and within the district. The Project is also identified in the South West Regional Blueprint.

Will local businesses have the opportunity to tender for construction works?

Local businesses will have the opportunity to tender for both civil and aviation works. Tender packages will be publicly advertised on the City website.

What air services are currently operating at the Airport?

The BMRRR currently services 10 closed FIFO charters per week, adhoc private charters and unrestricted Emergency Services including: Royal Flying Doctors Service (RFDS), Department of Fire & Emergency Services (DFES) helitacs, and Surf Life Saving (SLS) rescue helicopter.

What is Regular Public Transport (RPT) service?

Regular Public Transport (RPT) refers to public, passenger flights on established routes that operate with regular timetables and for which passengers pay a commercial predetermined price or fee.

Does the BMRRR currently operate RPT services?

Until recently, the BMRRR operated 6 RPT flights per week. The BMRRR does not currently operate RPT services.

What can I do if I am concerned about aircraft noise at my property?

The City of Busselton's Noise Management Plan (NMP) provides information and procedures related to aircraft noise. The plan is available on the City's website: <http://www.busselton.wa.gov.au/Community-Services/Facilities/Busselton-Regional-Airport/Noise-Management-Plan>.

For more info contact

AirportProject@Busselton.wa.gov.au or go to www.busselton.wa.gov.au/Community-Services/Facilities/Busselton-Regional-Airport

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Department of **Transport**



Busselton-Margaret River Regional Airport

Understanding Aircraft Noise



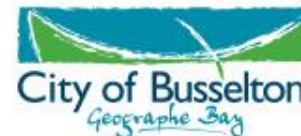
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Department of Transport



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Today's Agenda:

- Busselton Airport background
- Busselton-Margaret River Regional Airport Project Scope
- Understanding aircraft noise
- Noise modelling
- How we manage noise



Current Airport Site





Airport Terminal - 2015





Busselton-Margaret River Regional Airport Location



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





2016 Concept Plan



The development includes:

- Lengthening, widening & strengthening of the runway to facilitates 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



Understanding Aircraft Noise - How noise is made

- 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.



Passenger car
70dB²



Diesel truck
95dB³



Telephone dial tone
70dB



Emergency siren
95dB



Dishwasher
55dB



Aircraft
max 85dB¹



Conversation
60-85dB



Construction site
90dB



Useful websites

www.aircraftnoise.com.au

www.airservicesaustralia.com

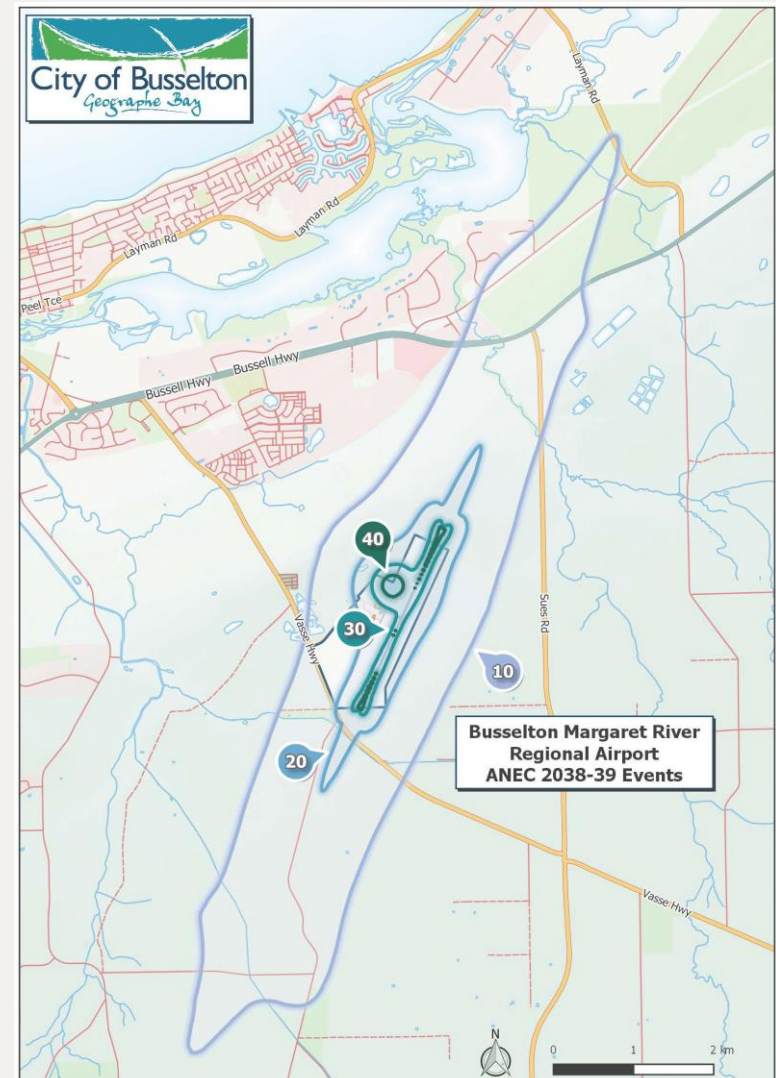
Coming soon

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.





N65 2038/39

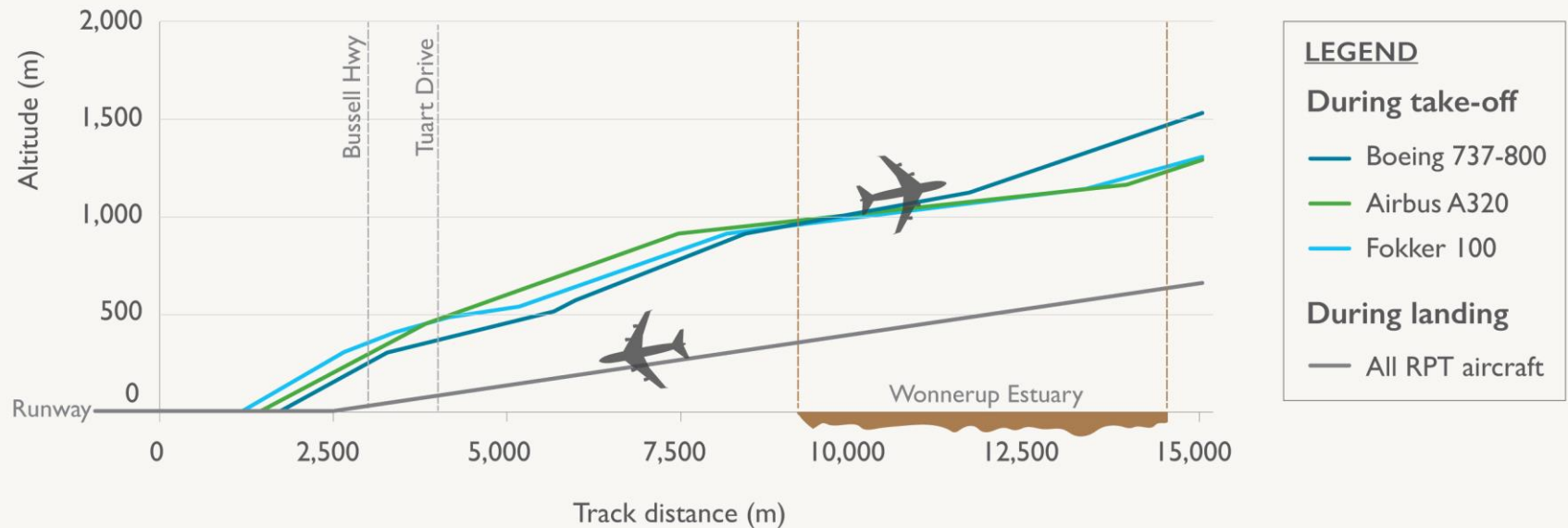




Flight Paths

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





Runway Usage Tracks

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

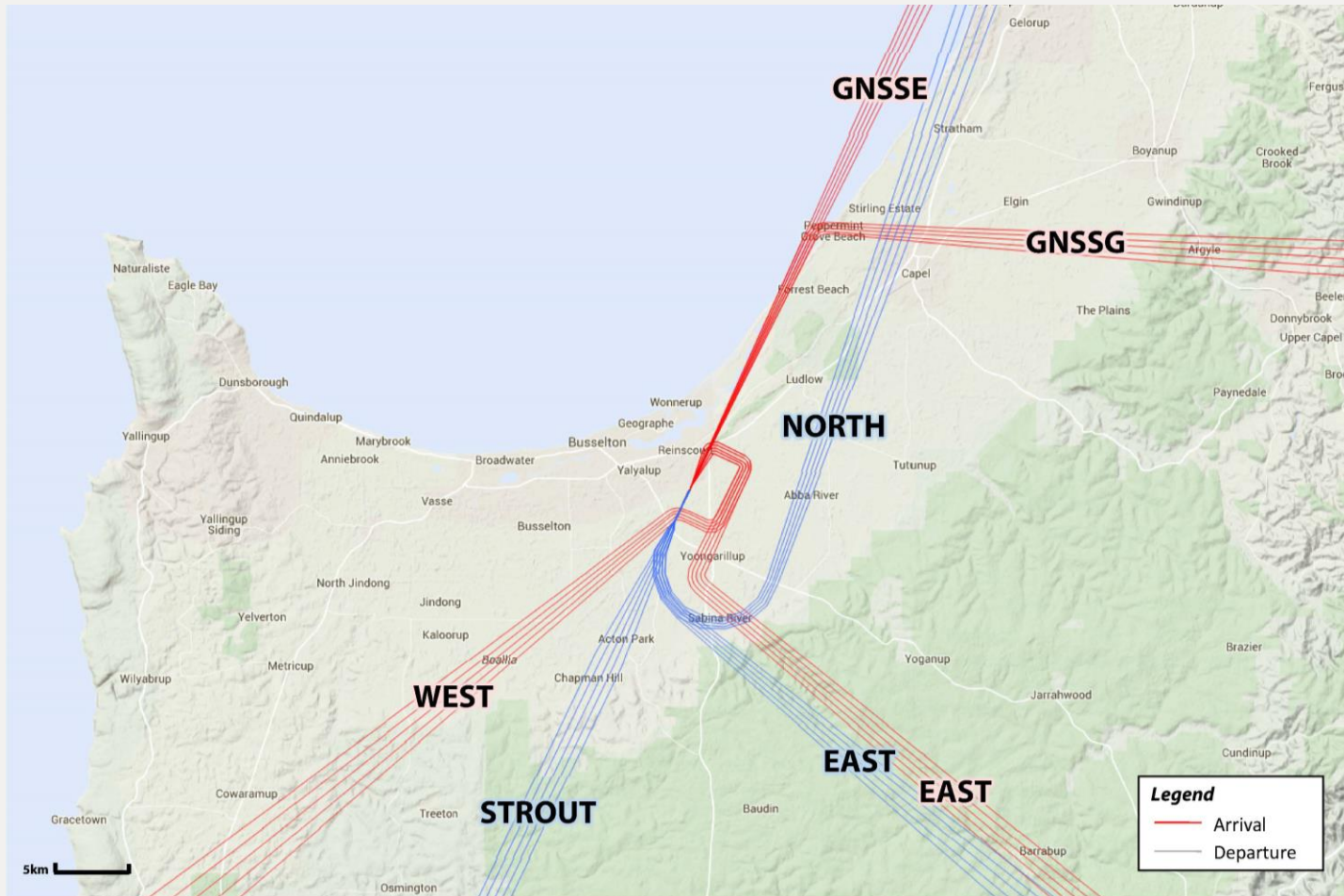
Runway 03 flight tracks

Usage	
Runway 03	40%
Runway 21	60%





Runway 21 flight tracks





Estimated number of flights per week*





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;
- Noise amelioration process that meets Australian Standard AS2021:2015.

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.



Questions



Thank you for attending.

Further questions:

AirportProject@Busselton.wa.gov.au

