



## Referral of proposed action

### What is a referral?

The *Environment Protection and Biodiversity Conservation Act 1999* (the EPBC Act) provides for the protection of the environment, especially matters of national environmental significance (NES). Under the EPBC Act, a person must not take an action that has, will have, or is likely to have a significant impact on any of the matters of NES without approval from the Australian Government Environment Minister or the Minister's delegate. (Further references to 'the Minister' in this form include references to the Minister's delegate.) To obtain approval from the Environment Minister, a proposed action should be referred. The purpose of a referral is to obtain a decision on whether your proposed action will need formal assessment and approval under the EPBC Act.

Your referral will be the principal basis for the Minister's decision as to whether approval is necessary and, if so, the type of assessment that will be undertaken. These decisions are made within 20 business days, provided sufficient information is provided in the referral.

### Who can make a referral?

Referrals may be made by or on behalf of a person proposing to take an action, the Commonwealth or a Commonwealth agency, a state or territory government, or agency, provided that the relevant government or agency has administrative responsibilities relating to the action.

### When do I need to make a referral?

A referral must be made for actions that are likely to have a significant impact on the following matters protected by Part 3 of the EPBC Act:

- World Heritage properties (sections 12 and 15A)
- National Heritage places (sections 15B and 15C)
- Wetlands of international importance (sections 16 and 17B)
- Listed threatened species and communities (sections 18 and 18A)
- Listed migratory species (sections 20 and 20A)
- Protection of the environment from nuclear actions (sections 21 and 22A)
- Commonwealth marine environment (sections 23 and 24A)
- Great Barrier Reef Marine Park (sections 24B and 24C)
- A water resource, in relation to coal seam gas development and large coal mining development (sections 24D and 24E)
- The environment, if the action involves Commonwealth land (sections 26 and 27A), including:
  - actions that are likely to have a significant impact on the environment of Commonwealth land (even if taken outside Commonwealth land);
  - actions taken on Commonwealth land that may have a significant impact on the environment generally;
- The environment, if the action is taken by the Commonwealth (section 28)
- Commonwealth Heritage places outside the Australian jurisdiction (sections 27B and 27C)

You may still make a referral if you believe your action is not going to have a significant impact, or if you are unsure. This will provide a greater level of certainty that Commonwealth assessment requirements have been met.

To help you decide whether or not your proposed action requires approval (and therefore, if you should make a referral), the following guidance is available from the Department's website:

- the Policy Statement titled Significant Impact Guidelines 1.1 – Matters of National Environmental Significance. Additional sectoral guidelines are also available.

- the Policy Statement titled Significant Impact Guidelines 1.2 - Actions on, or impacting upon, Commonwealth land, and actions by Commonwealth agencies.
- the Policy Statement titled Significant Impact Guidelines: Coal seam gas and large coal mining developments—Impacts on water resources.
- the interactive map tool (enter a location to obtain a report on what matters of NES may occur in that location).

#### **Can I refer part of a larger action?**

In certain circumstances, **the Minister may not accept a referral for an action that is a component of a larger action and may request the person proposing to take the action to refer the larger action for consideration under the EPBC Act (Section 74A, EPBC Act)**. If you wish to make a referral for a staged or component referral, read 'Fact Sheet 6 Staged Developments/Split Referrals' and contact the Referrals Gateway (1800 803 772).

#### **Do I need a permit?**

Some activities may also require a permit under other sections of the EPBC Act or another law of the Commonwealth. Information is available on the Department's web site.

#### **Is your action in the Great Barrier Reef Marine Park?**

If your action is in the Great Barrier Reef Marine Park it may require permission under the *Great Barrier Reef Marine Park Act 1975* (GBRMP Act). If a permission is required, referral of the action under the EPBC Act is deemed to be an application under the GBRMP Act (see section 37AB, GBRMP Act). This referral will be forwarded to the Great Barrier Reef Marine Park Authority (the Authority) for the Authority to commence its permit processes as required under the Great Barrier Reef Marine Park Regulations 1983. If a permission is not required under the GBRMP Act, no approval under the EPBC Act is required (see section 43, EPBC Act). The Authority can provide advice on relevant permission requirements applying to activities in the Marine Park.

The Authority is responsible for assessing applications for permissions under the GBRMP Act, GBRMP Regulations and Zoning Plan. Where assessment and approval is also required under the EPBC Act, a single integrated assessment for the purposes of both Acts will apply in most cases. Further information on environmental approval requirements applying to actions in the Great Barrier Reef Marine Park is available from <http://www.gbrmpa.gov.au/> or by contacting GBRMPA's Environmental Assessment and Management Section on (07) 4750 0700.

The Authority may require a permit application assessment fee to be paid in relation to the assessment of applications for permissions required under the GBRMP Act, even if the permission is made as a referral under the EPBC Act. Further information on this is available from the Authority:

Great Barrier Reef Marine Park Authority

2-68 Flinders Street PO Box 1379

Townsville QLD 4810

AUSTRALIA

Phone: + 61 7 4750 0700

Fax: + 61 7 4772 6093

[www.gbrmpa.gov.au](http://www.gbrmpa.gov.au)

#### **What information do I need to provide?**

**Completing all parts of this form will ensure that you submit the required information and will also assist the Department to process your referral efficiently. If a section of the referral document is not applicable to your proposal enter N/A.**

You can complete your referral by entering your information into this Word file.

#### **Instructions**

Instructions are provided in blue text throughout the form.

#### **Attachments/supporting information**

The referral form should contain sufficient information to provide an adequate basis for a decision on the likely impacts of the proposed action. You should also provide supporting documentation, such as environmental reports or surveys, as attachments.

Coloured maps, figures or photographs to help explain the project and its location should also be submitted with your referral. Aerial photographs, in particular, can provide a useful perspective and context. Figures should be good quality as they may be scanned and viewed electronically as black and white documents. Maps should be of a scale that clearly shows the location of the proposed action and any environmental aspects of interest.

**Please ensure any attachments are below three megabytes (3mb) as they will be published on the Department's website for public comment. To minimise file size, enclose maps and figures as separate files if necessary. If unsure, contact the Referrals Gateway (email address below) for advice. Attachments larger than three megabytes (3mb) may delay processing of your referral.**

**Note: the Minister may decide not to publish information that the Minister is satisfied is commercial-in-confidence.**

### **How do I pay for my referral?**

From 1 October 2014 the Australian Government commenced cost recovery arrangements for environmental assessments and some strategic assessments under the EPBC Act. If an action is referred on or after 1 October 2014, then cost recovery will apply to both the referral and any assessment activities undertaken. Further information regarding cost recovery can be found on the Department's website at:

<http://www.environment.gov.au/epbc/publications/cost-recovery-cris>

#### **Payment of the referral fee can be made using one of the following methods:**

- **EFT Payments can be made to:**

BSB: 092-009

Bank Account No. 115859

Amount: \$7352

Account Name: Department of the Environment.

Bank: Reserve Bank of Australia

Bank Address: 20-22 London Circuit Canberra ACT 2601

Description: The reference number provided (see note below)

- **Cheque** - Payable to "Department of the Environment". Include the reference number provided (see note below), and if posted, address:

The Referrals Gateway  
Environment Assessment Branch  
Department of the Environment  
GPO Box 787  
Canberra ACT 2601

- **Credit Card**

Please contact the Collector of Public Money (CPM) directly (call (02) 6274 2930 or 6274 20260 and provide the reference number (see note below).

Note: in order to receive a reference number, submit your referral and the Referrals Gateway will email you the reference number.

### **How do I submit a referral?**

Referrals may be submitted by mail or email.

#### **Mail to:**

Referrals Gateway  
Environment Assessment Branch  
Department of Environment  
GPO Box 787  
CANBERRA ACT 2601

- If submitting via mail, electronic copies of documentation (on CD/DVD or by email) are required.

**Email to: [epbc.referrals@environment.gov.au](mailto:epbc.referrals@environment.gov.au)**

- Clearly mark the email as a 'Referral under the EPBC Act'.
- Attach the referral as a Microsoft Word file and, if possible, a PDF file.
- **Follow up with a mailed hardcopy including copies of any attachments or supporting reports.**

## **What happens next?**

Following receipt of a valid referral (containing all required information) you will be advised of the next steps in the process, and the referral and attachments will be published on the Department's web site for public comment.

The Department will write to you within 20 business days to advise you of the outcome of your referral and whether or not formal assessment and approval under the EPBC Act is required. There are a number of possible decisions regarding your referral:

**The proposed action is NOT LIKELY to have a significant impact and does NOT NEED approval**

No further consideration is required under the environmental assessment provisions of the EPBC Act and the action can proceed (subject to any other Commonwealth, state or local government requirements).

**The proposed action is NOT LIKELY to have a significant impact IF undertaken in a particular manner**

The action can proceed if undertaken in a particular manner (subject to any other Commonwealth, state or local government requirements). The particular manner in which you must carry out the action will be identified as part of the final decision. You must report your compliance with the particular manner to the Department.

**The proposed action is LIKELY to have a significant impact and does NEED approval**

If the action is likely to have a significant impact a decision will be made that it is a *controlled action*. The particular matters upon which the action may have a significant impact (such as World Heritage values or threatened species) are known as the *controlling provisions*.

The controlled action is subject to a public assessment process before a final decision can be made about whether to approve it. The assessment approach will usually be decided at the same time as the controlled action decision. (Further information about the levels of assessment and basis for deciding the approach are available on the Department's web site.)

**The proposed action would have UNACCEPTABLE impacts and CANNOT proceed**

The Minister may decide, on the basis of the information in the referral, that a referred action would have clearly unacceptable impacts on a protected matter and cannot proceed.

## **Compliance audits**

If a decision is made to approve a project, the Department may audit it at any time to ensure that it is completed in accordance with the approval decision or the information provided in the referral. If the project changes, such that the likelihood of significant impacts could vary, you should write to the Department to advise of the changes. If your project is in the Great Barrier Reef Marine Park and a decision is made to approve it, the Authority may also audit it. (See "*Is your action in the Great Barrier Reef Marine Park*," p.2, for more details).

## **For more information**

- call the Department of the Environment Community Information Unit on 1800 803 772 or
- visit the web site <http://www.environment.gov.au/epbc>

All the information you need to make a referral, including documents referenced in this form, can be accessed from the above web site.

# Referral of proposed action

**Project title:** Busselton-Margaret River Regional Airport Development Project

## 1 Summary of proposed action

**NOTE:** You must also attach a map/plan(s) and associated geographic information system (GIS) vector (shapefile) dataset showing the location and approximate boundaries of the area in which the project is to occur. Maps in A4 size are preferred. You must also attach a map(s)/plan(s) showing the location and boundaries of the project area in respect to any features identified in 3.1 & 3.2, as well as the extent of any freehold, leasehold or other tenure identified in 3.3(i).

### 1.1 Short description

The City of Busselton (CoB; the Proponent) proposes to develop the Busselton-Margaret River Regional Airport through an expansion of the existing airport facilities situated on Vasse Highway, Busselton, WA (the proposed action). The proposed action is planned to allow the operation of Regular Public Transport (RPT) and freight jet aircraft up to Code 4C.

The proposed action comprises the following development works:

- extension, widening and strengthening of the runway from current 1800m x 30m wide to 2460m x 45m wide
- new terminal building
- new carpark with 600 carpark bays
- new entry statement and internal road networks
- 2 new aircraft parking bays and connecting taxiway
- Increased General Aviation precinct
- drainage infrastructure and service utilities
- land acquisition.

### 1.2 Latitude and longitude

Latitude and longitude details are used to accurately map the boundary of the proposed action. If these coordinates are inaccurate or insufficient it may delay the processing of your referral.

location point	Latitude			Longitude		
	degrees	minutes	seconds	degrees	minutes	seconds
1	-33	40	24	115	24	24
2	-33	40	31	115	24	40
3	-33	41	42	115	23	59
4	-33	41	50	115	23	59
5	-33	41	50	115	23	55
6	-33	42	5	115	23	47
7	-33	42	18	115	23	40
8	-33	42	18	115	23	25
9	-33	42	4	115	23	30
10	-33	41	54	115	23	37
11	-33	41	25	115	23	24
12	-33	41	23	115	23	30
13	-33	41	6	115	23	47
14	-33	41	5	115	23	47
15	-33	40	57	115	23	56
16	-33	41	0	115	24	4
17	-33	40	38	115	24	16
18	-33	40	32	115	24	15
19	-33	40	31	115	24	20

The location of the proposed action area is presented in Figure 1.

1.3

**Locality and property description**  
The proposed action is located within the City of Busselton and comprises the following lots:

- Lot 9001 Plan 32476
- Lot 1 Plan 53715
- Lot 3819 Plan 153196
- Lot 57 Plan 5398
- Lot 203 Plan 32475
- Lot 591 Plan 126664

Lot 9001 is zoned for Special purpose: Busselton Regional Airport, whereas Lots 1, 203, 3819 and 591 are zoned for Agriculture, under Town Planning Scheme No. 21. Lot 1 and a portion of Lots 203 and 3819 will be acquired by the Proponent and incorporated into the proposed action. Clearing and/or pruning of vegetation will be required within Lots 57 and 591 to accommodate changes in the Obstacle Limitation Surface (OLS). The proposed action area is surrounded by agricultural land to the north-east, east and south, with the Vasse River Diversion Drain and flood attenuation basin to the south, Busselton cemetery and the proposed Airport North Industry Park to the immediate north-west, and residential areas along Bussell Highway approximately 2 km to the north-west.

The proposed action area is located approximately 6.5 km to the south-east of the main Busselton town site area and approximately 3.5 km to the south of the Vasse-Wonnerup wetlands.

1.4

**Size of the development footprint or work area (hectares)**  
The proposed action comprises an envelope of 230 ha within which ground disturbance, vegetation clearing and development of facilities and infrastructure may occur. The detailed arrangement of facilities and infrastructure and associated ground disturbance/clearing within the proposed action area remains to be determined.  
Of the 230 ha, approximately 25 ha lie within Lots 57 and 591. These lots will not be incorporated into the Busselton-Margaret River Regional Airport, but are included in the proposed action area as they will involve clearing and/or pruning of vegetation to accommodate changes in the OLS.  
It should be noted that ground disturbance and clearing of vegetation will only comprise a portion of the proposed action area.

1.5

**Street address of the site**  
86 Neville Hyder Drive, Yalyalup WA 6280.

1.6

**Lot description**  
The proposed action area comprises five lots as follows:

- Lot 9001 Plan 32476 – existing airport
- Lot 1 Plan 53715 – lot immediately south of the airport, to be acquired and incorporated into the airport
- Lot 3819 Plan 153196 – lot immediately north of the airport, a portion of which is to be acquired and incorporated into the airport
- Lot 203 Plan 32475 – lot immediately north of the airport, a portion of which is to be acquired and incorporated into the airport
- Lot 57 Plan 5398 – Vasse Highway south of the airport, along which vegetation will need to be cleared or pruned for changes to the airport Obstacle Limitation Surface (OLS)
- Lot 591 Plan 126664 – lot south of Vasse Highway, within which vegetation will need to be cleared or pruned for changes to the OLS

1.7

**Local Government Area and Council contact (if known)**  
The proposed action is being developed by the City of Busselton and will be subject to self-assessment.  
The relevant council contact officer is Jennifer May and can be contacted at the City of Busselton on (08) 9781 0389.

1.8

**Time frame**  
The Busselton-Margaret River Regional Airport will be a long term transport infrastructure asset for the South-West Region, with a lifetime of at least 50 years.  
Construction works are proposed to commence in September 2016 and be complete by December 2018, with the first RPT operations commencing in late 2018.

1.9

<b>Alternatives to proposed action</b> Were any feasible alternatives to	X	No
---	---	----

	taking the proposed action (including not taking the action) considered but are not proposed?		Yes, you must also complete section 2.2
1.10	<b>Alternative time frames etc</b> Does the proposed action include alternative time frames, locations or activities?	X	No
			Yes, you must also complete Section 2.3. For each alternative, location, time frame, or activity identified, you must also complete details in Sections 1.2-1.9, 2.4-2.7 and 3.3 (where relevant).
1.11	<b>State assessment</b> Is the action subject to a state or territory environmental impact assessment?		No
		X	Yes, you must also complete Section 2.5
1.12	<b>Component of larger action</b> Is the proposed action a component of a larger action?	X	No
			Yes, you must also complete Section 2.7
1.13	<b>Related actions/proposals</b> Is the proposed action related to other actions or proposals in the region (if known)?	X	No
			Yes, provide details:
1.14	<b>Australian Government funding</b> Has the person proposing to take the action received any Australian Government grant funding to undertake this project?	X	No
			Yes, provide details:
1.15	<b>Great Barrier Reef Marine Park</b> Is the proposed action inside the Great Barrier Reef Marine Park?	X	No
			Yes, you must also complete Section 3.1 (h), 3.2 (e)

## 2 Detailed description of proposed action

### 2.1 Description of proposed action

The Proponent proposes to develop the Busselton-Margaret River Regional Airport through an expansion of the existing airport facilities along Vasse Highway, Busselton, WA. The proposed action is planned to allow the operation of Regular Public Transport (RPT) and freight jet aircraft up to Code 4C such as Boeing 737 (B737) and Airbus 320 (A320).

The number and timing of the RPT/freight flights remains uncertain and will be determined in negotiation with commercial airlines, however an indicative forecast of aircraft movements has been developed by the Proponent and is presented below. These traffic forecasts have been used in the preparation of Australian Noise Exposure Contours (ANEC) and N-contours to be included in the assessment under the WA *Environmental Protection Act 1986* (see Section 2.5) and for the purposes of community and stakeholder consultation (see Section 2.6).

The table shows aircraft movements, which include arrivals ('ARR') and departures ('DEP') to give the total movements ('TOT'). The movements of existing approved aircraft, including closed charter for Fly In-Fly Out (FIFO) operations (Fokker 100 aircraft) and General Aviation are shown in black with the proposed RPT and freight flights shown in red. It should be noted that the flights of closed charter and general aviation are expected to grow gradually at the existing airport, irrespective of the proposed action taking place.

**Table 1: Aircraft movement forecast for proposed action**

<i><b>Class / Operator</b></i>	<i><b>2015/16 (weekly)</b></i>	<i><b>2018/19 (weekly)</b></i>	<i><b>2022/23 (weekly)</b></i>	<i><b>2028/29 (weekly)</b></i>	<i><b>2038/39 (weekly)</b></i>
FIFO closed charter	20	22	24	24	24
<b>RPT – Melbourne</b>	<b>0</b>	<b>6</b>	<b>8</b>	<b>10</b>	<b>18</b>
<b>RPT – Sydney</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>6</b>	<b>6</b>
<b>Freight services</b>	<b>0</b>	<b>4</b>	<b>6</b>	<b>6</b>	<b>6</b>
General Aviation	230	242	255	266	271
<b>Total Weekly Flights</b>	<b>250</b>	<b>274</b>	<b>299</b>	<b>312</b>	<b>325</b>

The Busselton-Margaret River Regional Airport (BMRRA) is currently classified as G-airspace which is uncontrolled airspace and a reclassification of airspace is not required as part of the proposed action. Accordingly no request for advice or assessment is expected to be applicable under section 160 of the EPBC Act.

As the airspace is uncontrolled there are no mandatory defined flight paths, with pilots being free to choose the flight path on the basis of weather, safety and economic factors. However, indicative flight paths have been used for the basis of ANEC and N-contours and for the purposes of community and stakeholder consultation and are presented in Figure 2 and Figure 3. These indicative flight paths are based on the Departure and Approach Procedures (DAPs) published by Airservices Australia through the Aeronautical Information Package (AIP) and operational knowledge of the flight paths typically taken by aircraft, including pilots considering the Fly Neighbourly Agreement, which seeks to limit flights over noise sensitive areas surrounding the airport.

Figure 2 presents indicative flight paths for Runway 03, which involves arrivals from the south and departures to the north. Figure 3 presents indicative flight paths for Runway 21, which involves arrivals from the north and departures to the south.

The proposed action comprises the following development works:

- extension, widening and strengthening of the runway from current 1800m x 30m wide to 2460m x 45m wide
- new terminal building
- new carpark with 600 carpark bays
- new entry statement and internal road networks
- 2 new aircraft parking bays and connecting new taxiway
- Increased General Aviation precinct
- drainage infrastructure and service utilities
- land acquisition.

The layout of the existing airport facilities is presented in Figure 4. An indicative layout of the development works for the proposed action is presented in Figure 5.



The proposed action area will be drained in a similar fashion to the existing airport facilities, via open unlined swale drains that flow to the south then west, with the drains from the western portion of the proposed action area discharging into a wet retention basin in the south-west corner of the area (Figure 5). The wet retention basin and the drains from the eastern portion of the proposed action area will discharge into a drain that flows west across the Vasse Highway and discharges into the Vasse River Diversion Drain (Figure 1), which is owned and operated by the WA Water Corporation.

The proposed action area has been subject to a Level 1 flora and vegetation survey (Natural Area Holdings 2016), which found that the vegetation within Lots 9001, 1 and 3819 is 'completely degraded' or 'degraded', with the structure of the vegetation no longer intact and the area completely or almost completely without native species. The proposed action will require clearing of native vegetation within Lots 9001, 1 and 3819 including scattered trees within cleared paddocks, isolated trees along Neville Hyder Drive, and sedgeland within degraded seasonal wetlands to the north-west of the runway (Figure 6). In addition there will be clearing and/or pruning of native vegetation further to the south to accommodate changes in the Obstacle Limitation Surface (OLS) as part of the proposed action, although the extent of clearing and/or pruning remains to be determined. This vegetation lies along Vasse Highway (Lot 57 Plan 5398) and Acton Park Road and within Lot 591 Plan 126664 (Figure 6), and is in a 'degraded', 'good' or 'very good' condition.

The proposed action will be referred to the WA Environmental Protection Authority (EPA) for consideration for assessment under Part IV of the WA *Environmental Protection Act 1986* (EP Act). Discussions have been held with the Office of the EPA (OEPA) on the key environmental factors, stakeholder consultation and approvals pathway for the proposed action under the EP Act.

## 2.2 Alternatives to taking the proposed action

There are no alternatives to taking the proposed action. The proposed action has been identified as a key driver for the social and economic development of the South West Region, through promotion of tourism, freight and industry diversification. The proposed action has been identified as a key project in the South West Blue Print (South West Development Commission 2014) and acknowledged as such by the approved funding from the WA State Government to the value of \$55.9 million.

The environmental assessment for the existing Busselton Regional Airport (CMPS&F 1995) included an assessment of alternative sites for an airport, with the existing airport site selected as the most suitable and approved by the WA Government under the WA EP Act.

## 2.3 Alternative locations, time frames or activities that form part of the referred action

There are no alternative locations, timeframes or activities that form part of the proposed action.

## 2.4 Context, planning framework and state/local government requirements

The proposed action will be in accordance with the legislation and regulations summarised in Table 2.

**Table 2: State legislation and regulations relevant to the proposed action**

Title	General Description
<i>Aboriginal Heritage Act 1972</i>	The protection of Aboriginal Heritage sites.
<i>Environmental Protection Act 1986 (EP Act)</i>	<p>The proposed action will be referred to the WA EPA for consideration for assessment under Part IV of the EP Act.</p> <p>The following regulations under the EP Act are also applicable:</p> <ul style="list-style-type: none"> <li>• Environmental Protection Regulations 1987</li> <li>• Environmental Protection (Clearing of Native Vegetation) Regulations 2004.</li> </ul>
<i>Local Government Act 1995</i>	Provides for a system of local government.
<i>Planning and Development Act 2005</i>	<p>Provides a framework for implementation of town planning schemes and regional schemes, as well as a process for scheme amendments, zoning transfers and development applications.</p> <p>The development of an airport at the proposed action area is consistent with Town Planning Scheme No. 21 and the Busselton Airport Structure Plan.</p>
<i>Native Title (State Provisions) Act 1999</i>	Recognises native title in lands.
<i>Radiation Safety Act 1975</i>	Regulates the keeping and use of radioactive substances, irradiating apparatus and certain electronic products.

Title	General Description
<i>Rights in Water and Irrigation Act 1914 (RIWI Act)</i>	Provision for the regulation, management, use and protection of water resources, to provide for irrigation schemes.  Water supply options are being reviewed. Should groundwater bores or abstraction be necessary, a licence will be sought under the RIWI Act.
<i>Soils and Land Conservation Act 1945</i>	Relates to the conservation of soil and land resources, and to mitigate the effects of erosion, salinity and flooding.
<i>Wildlife Conservation Act 1950</i>	Provision for the conservation and protection of wildlife.

The following key EPA policies and guidance documents are relevant to the proposed action:

- Environmental Impact Assessment (Part IV Divisions 1 and 2) Administrative Procedures 2012
- Environmental Assessment Guideline No. 1 – Defining the Key Characteristics of a Proposal
- EPA Position Statement No. 2 - Environmental Protection of Native Vegetation in Western Australia
- EPA Position Statement No. 3 - Terrestrial Biological Surveys as an Element of Biodiversity Protection
- EPA Guidance Statement No. 51 - Terrestrial Flora and Vegetation Surveys for Environmental Impact Assessment in Western Australia
- Environmental Protection Bulletin No. 1 – Environmental Offsets – Biodiversity
- EPA Guidance Statement No. 55 - Implementing best practice in proposals submitted to the environmental impact assessment process
- EPA Environmental Assessment Guideline No. 8 - Environmental Assessment Guidelines for Environmental factors and objectives.

## 2.5 Environmental impact assessments under Commonwealth, state or territory legislation

The proposed action will be referred to the WA EPA to be considered for assessment under Part IV of the EP Act. Discussion has been undertaken with the Office of the EPA (OEPA) regarding the proposed action and the following two key environmental factors will be addressed in the referral:

- terrestrial fauna (aircraft disturbance)
- amenity (aircraft disturbance).

The OEPA contact familiar with the proposed action is Amy Sgherza, who may be contacted on (08) 6145 0818.

## 2.6 Public consultation (including with Indigenous stakeholders)

The Proponent has undertaken a consultation program with key stakeholders in relation to the proposed action. The stakeholder groups consulted to date include:

- State government agencies, including OEPA, Department of Parks and Wildlife (DPaW), Department of Water (DoW), Department of Aboriginal Affairs (DAA), Department of Transport (DoT), Department of Mines and Petroleum (DMP)
- Commonwealth government agencies, including Department of the Environment (DotE), Airservices Australia (ASA) and Civil Aviation Safety Authority (CASA)
- local residents, including those in the vicinity of the airport and the wider community of the City of Busselton

The methods for consultation and communication included:

- face-to-face meetings
- community information sessions
- Industry presentations
- Airport Advisory Committee meetings
- telephone calls
- direct mail and email.

Table 3 summarises the key consultation events, topics raised and the response to matters raised.

The City of Busselton will maintain a stakeholder consultation program throughout the life of the proposed action as part of normal business practice, providing updates to relevant stakeholders as required. The list of stakeholders will continue to be developed and revised as required.

**Table 3: Stakeholder consultation**

Key stakeholder	Issues raised	Response
<b>Government</b>		
DPaW	Disturbance to waterbirds from aircraft movements. DPaW noticed disturbance occurring during bird counts. Bird strike in the vicinity of the airport.	Bamford Consulting Ecologists engaged to undertake a literature review and risk assessment of aircraft disturbance to waterbirds. Fly Neighbourly Agreement to be promoted to commercial airlines to minimise flights over the Vasse Wonnerup wetlands. Airport grounds to be graded and maintained to minimise nesting habitat for birds.
OEPA	Introduction to proposal. Discussion of key environmental factors as being amenity and terrestrial fauna. Other factors to be addressed include inland waters environmental quality (stormwater and spills), vegetation and flora (clearing), and heritage (clearing/ground disturbance).	Preparation of s 38 referral. To70 Aviation (Australia) engaged to undertake aircraft noise modelling. GHD engaged to undertake a peer review of the aircraft noise modelling report. Bamford Consulting Ecologists engaged to undertake a literature review and risk assessment of aircraft disturbance to waterbirds.
DoW	Stormwater drainage should use vegetated systems (e.g. swales) to maximise infiltration and sediment capture. Spill capture to incorporate mobile spill equipment and triple interceptors on refuelling aprons. Groundwater control to be effected through existing methods at the airport. Groundwater abstraction licence will be required for any bores or abstraction from the wet retention basin, which may intersect groundwater.	Stormwater management, spill capture and groundwater control and licensing recommendations will be incorporated into design, construction and operation of the airport.
DMP	Fuel farm to be designed and licensed as required under the <i>Dangerous Goods Safety Act 2004</i> .	Fuel farm will be licensed as required under the DGS Act.
DotE	Briefing on the proposed action and discussion on relevant Matters of National Environmental Significance.	Preparation of an EPBC Act referral (this document).
AirServices Australia	No issues raised.	The City of Busselton will formally request ASA to review and prepare new DAPs for the proposal.
CASA	No issues raised.	The City of Busselton will formally request consultation and review of the Airside design and construction works plan as well as review and sign-off during the project.
<b>Community</b>		
City of Busselton residents	Concern about flight path(s) situation over residential areas and resulting aircraft noise. Concern on proposal for flights during night hours between 0000-0600hrs being proposed in the draft Noise Management Plan. Concern about the potential for increased aircraft noise impacts. Concern of potential impact on the wetlands.	The City of Busselton will liaise with ASA on flight path design and put forward community concerns during the process to ensure that aircraft noise resulting from flight paths situated over residential areas is minimised either through design or sharing of flight path approaches/departures from different directions. The draft Noise Management Plan (NMP) including the proposed changes to extend the standard operating hours to unrestricted is currently available for public comment. All public submissions will be considered by the City of Busselton Council prior to being considered for endorsement and then submitted to the OEPA as part of the API-A referral. The Noise Management Plan contains the processes by which residents/community members can submit noise complaints or requests for noise monitoring and if appropriate noise amelioration. Bamford Consulting Ecologists engaged to undertake a literature review and risk assessment of aircraft disturbance to waterbirds.

**2.7 A staged development or component of a larger project**

The proposed action will be undertaken in a single stage and no further staging or components are proposed as part of the action.

## **3 Description of environment & likely impacts**

### **3.1 Matters of national environmental significance**

#### **3.1 (a) World Heritage Properties**

##### **Description**

There are no world heritage properties within or in close proximity to the proposed action area.

##### **Nature and extent of likely impact**

There are unlikely to be any impact on world heritage areas as a result of this proposed action.

---

#### **3.1 (b) National Heritage Places**

##### **Description**

There are no national heritage places in the vicinity of the proposed action.

##### **Nature and extent of likely impact**

There are unlikely to be any impact on national heritage places or values as a result of this proposed action.

---

#### **3.1 (c) Wetlands of International Importance (declared Ramsar wetlands)**

## Description

The proposed action area lies approximately 3.5 km to the south of the Vasse Wonnerup wetlands system, which is a declared Ramsar wetlands site. The location of the proposed action area with respect to the Ramsar wetlands site is presented in Figure 1.

The Vasse-Wonnerup system is an extensive, shallow, nutrient-enriched wetland system of highly varied salinities and hydroperiods (i.e. flooded in winter, with large areas drying out in summer). The system is fringed by samphire and rushes with some melaleuca woodlands on higher ground. The Tuart Forest component of the Vasse-Wonnerup wetlands Ramsar site is dominated by open forest of mature Tuart (*Eucalyptus gomphocephala*) and Peppermint (*Agonis flexuosa*) trees. Tree hollows in these areas provide important breeding sites for Australian Wood Duck, Australian Shelduck and possibly other duck species. The native Rakali or Water-Rat (*Hydromys chrysogaster*) has been recorded at several locations. The wetlands cover an area of approximately 1,115 hectares (ha) and support tens of thousands of resident and migrant waterbirds of a wide variety of species.

The wetlands are of national and international importance and are justified as a Ramsar wetland on the basis that they meet two of the nine criteria:

- Criterion 5: More than 33,000 waterbirds have been counted at the Vasse-Wonnerup System. Waterbird data indicate that more than 20,000 waterbirds use the Ramsar site each year, suggesting that the wetland regularly supports 20,000 waterfowl. This includes species such as Red-necked Avocets, Banded and Black-winged Stilts, Wood Sandpiper, Sharp-tailed Sandpiper, Long-toed Stint, Curlew Sandpiper and Common Greenshank.
- Criterion 6: At least 1% of the Australian population of Black-winged Stilt and at least 1% of the world population of Red-necked Avocet use the Vasse-Wonnerup System in most years.

## Nature and extent of likely impact

Consultation with DPaW and DotE has indicated concern regarding potential impacts from the proposed action to the Vasse Wonnerup wetlands due to aircraft disturbance to resident or migratory waterbirds. Consultation with DotE has also indicated concern regarding potential impacts to the wetlands due to nutrient and other pollutant runoff from the proposed action area entering the Vasse River.

An assessment of these two potential impacts is provided below.

### Aircraft disturbance to waterbirds

The Proponent engaged Bamford Consulting Ecologists (2016) to conduct a literature review and risk assessment of aircraft disturbance to waterbirds at the Vasse Wonnerup wetlands. A copy of the report is provided in Attachment 1 and a summary of their findings presented below.

Based on a small number of observations by DPaW personnel, current aircraft movements associated with the airport are disturbing waterbirds at least occasionally, but the responses appear to be short term and of a low intensity.

Research from around the world, including Australia, suggests that waterbirds will tolerate at least moderate levels of aircraft movement and noise. This includes breeding colonies of most waterbird groups. Research also identifies low-flying aircraft as posing the greatest risk, although there is some lack of consistency due to the many variables that can affect the response of waterbirds to a stimulus. In general, waterbirds do habituate to regular stimuli and this could make small, manoeuvrable aircraft a concern, rather than the larger jet aircraft as is proposed for the RPT and freight flights. The research suggest a vertical buffer of greater than 300m, a horizontal buffer of greater than 200m and a noise limit of 85 dB(A) are appropriate to minimise impacts to waterbirds (Bamford Consulting Ecologists 2016).

The indicative flight paths (Figure 2 and Figure 3) indicate that some arrival and departure flight paths will overfly the Vasse-Wonnerup wetlands, particularly Runway 03 departures and Runway 21 arrivals which may overfly the Wonnerup Estuary. The RPT/freight aircraft are predicted to remain above a vertical buffer of 300m over the wetlands (particularly for departures, which ascend more steeply than arrivals), but it is likely that some flights (smaller propeller planes such as general aviation) may pass at a lower height levels above the ground. The current DAPs (Departure and Approach procedures) have no horizontal buffer over the Vasse -Wonnerup Estuary. Based on the aircraft noise modelling undertaken for the proposal (To70 Australia 2015) the estimated maximum noise levels ( $LA_{max}$ ) of 65-78 dB(A) for B737 and A320 aircraft over the Wonnerup Estuary is within the 85 dB(A) noise limit suggested by the literature. The Wonnerup Estuary is noted for shorebirds and, in late winter/spring, a large breeding colony of Black Swans. Waterbirds on the Vasse Estuary are dominated by ducks and have both a vertical and horizontal buffer from the current flightpath.

The proposed action will increase the number of jet aircraft flights across a range of flight paths, some of which may overfly the Vasse-Wonnerup wetlands and the Wonnerup Estuary in particular. Based on aircraft noise modelling (To70 Australia 2015) the estimated maximum noise levels over the Wonnerup Estuary would be 65-78 dB(A) for B737 and A320 aircraft,

compared to an estimated 60-70 db(A) for existing F100 aircraft over the wetlands, or an increase of 5-8 dB(A). The highest noise levels will be in the southern portion of the Wonnerup Estuary, while the lowest noise levels will be in the northern portion of the estuary, where there is the large breeding colony of Black Swans. The frequency of RPT/freight movements over the wetlands is uncertain but is expected to be a fraction of the total RPT movements, as RPT flights may use southern or eastern flight paths (see Figures 2 and 3) rather than a northern approach/departure flight path over the wetlands. For example, it is forecast that after 20 years (i.e. by the year 2038/39) the RPT/freight operations will have grown to 30 movements (15 flights) per week, or an average of 4.3 movements per day. Of these movements, some may overfly the Vasse-Wonnerup wetlands depending on the flight paths adopted by the aircraft operators. Irrespective of the proposed action, it is expected that there will be an increase in general aviation, comprising small propeller planes.

Bamford (2016) concluded that the observations of waterbirds near aircraft from many studies indicates that the predicted increases in aircraft activity due to the proposed action do not adversely affect waterbirds assuming buffers and noise limits are adhered to. Likewise, the impact assessments undertaken for expansion projects at Brisbane Airport (EPBC 2005/2121), Sunshine Coast Airport (EPBC 2011/5823) and RAAF Williamtown (EPBC 2010/5747) indicated that the more frequent jet aircraft operations at those aerodromes did not pose a significant impact to waterbirds at nearby Ramsar sites, nor were additional measures such as monitoring and management proposed for the wetlands / waterbirds as part of the expansion projects.

Accordingly it is considered that the aircraft activities associated with the proposed action do not represent a significant impact to waterbirds or the Vasse-Wonnerup wetlands Ramsar site.

The Proponent has a voluntary 'Fly Neighbourly Agreement' in place for the existing airport with one the key objectives being for aircraft operators to avoid noise sensitive areas (residential premises) as far as is practical, within the limits of weather, safety and economic constraints. This agreement will be extended to include the Vasse-Wonnerup system as a noise sensitive area, including the sensitivity of the Wonnerup Estuary during the late winter/early spring breeding season for Black Swans. The Proponent will provide awareness to all flight operators of the sensitivity of the Vasse-Wonnerup system, particularly during the late winter/early spring period, and will promote the Fly Neighbourly Agreement to the RPT and freight flight operators.

#### Water quality impacts from nutrient and other pollutant runoff

##### ***Stormwater drainage network***

The existing airport is drained via a network of open unlined drains that flow to the south-west (Figure 5). The western side of the airport, including half of the runway and the apron, taxiway, buildings and carpark, drain into a wet retention basin located in the south-west corner of the airport (Figure 4). The eastern side of the airport, comprising half of the runway and the eastern side of the grassed airfield, drains to the south-west and into a drain that flows west and to the south of the wet retention basin. Both this southern drain and the overflow of the wet retention basin discharge to the west, across the Vasse Highway and into the Vasse Diversion Drain.

The proposed action will similarly be drained by a network of open unlined drains to cater for the landside development of access roads, carpark and terminal building, and the airside development of aprons, taxiways and runway extension (Figure 5). The western side of the proposed action area will discharge into the wet retention basin, with overflow from the basin and runoff from the eastern side of the proposed action area discharging into the Vasse Diversion Drain.

The proposed action area will therefore drain into the Vasse Diversion Drain, which flows to the west, intercepting and diverting flow from the Upper Vasse River at approximately 3 km to the west of the proposed action area, before flowing to the north-west and discharging directly into Geographe Bay (see Figure 1).

The Vasse Diversion Drain diverts the majority of the flow into Geographe Bay, bypassing the Vasse River and Vasse-Wonnerup wetlands, however a low flow culvert (900 mm diameter) permits some flow from the drain to discharge into the Lower Vasse River, which flows into the Vasse-Wonnerup wetlands Ramsar site.

The WA Department of Water (DoW) advises that the Vasse Diversion Drain flow averages 34.9 Gegalitres per year (GL/yr) upstream of the Vasse River low flow culvert, with flow averaging 24.5 GL/yr downstream of the culvert and 10.4 GL/yr discharging through the low flow culvert and into the Lower Vasse River. The Vasse Diversion Drain thus diverts approximately 70% of the flow away from the Lower Vasse River and directly into Geographe Bay, with the remaining 30% flowing into the Lower Vasse River and potentially Vasse-Wonnerup Ramsar site. Therefore, approximately 70% of the stormwater runoff from the proposed action area is expected to bypass the Vasse-Wonnerup Ramsar site and discharge directly into Geographe Bay, and 30% of the stormwater runoff is expected to discharge into the Vasse-Wonnerup Ramsar site.

The DoW also advises that the Vasse Diversion Drain has an average nutrient load of approximately 14 tonnes per year (t/yr) of Total Phosphorus (TP) and 76 t/yr of Total Nitrogen (TN), with approximately 3 t/yr TP and 21 t/yr TN flowing through the low flow culvert and into the Lower Vasse River. The total average nutrient load from the Lower Vasse River, including the

catchment downstream of the Vasse Diversion Drain low flow culvert, is approximately 5 t/yr TP and 34 t/yr TN. The Vasse Diversion Drain thus diverts approximately 72% of TN and 79% of TP from the Lower Vasse River into Geographe Bay, with the remaining 28% of TN and 21% of TP flowing into the Lower Vasse River and Vasse Estuary. The vast majority of the nutrient loads in the Vasse Diversion Drain result from agricultural activities such as cattle grazing, crop production (hay & silage), other smaller rural properties and urban areas.

The majority of stormwater and associated pollutants from the proposed action area will therefore drain into the Vasse Diversion Drain and directly into Geographe Bay, with a minority of stormwater and draining into the Lower Vasse River and Vasse Estuary, which forms part of the Vasse-Wonnerup wetlands Ramsar site.

### ***Nutrient loading from proposed action***

Nutrient loading from the proposed action will be limited to discharge from landscaped areas along the landside access roads, carpark and terminal building. The extent of landscaping has not yet been determined but the type of landscaping will be consistent with City of Busselton guidelines and standards, which limit exotic species to no more than 10% of plantings and limit fertiliser application through soil investigation and soil amendment. The total landscaping area is expected to comprise no more than approximately 5 ha, or 2.5% of the 205 ha that will form the Busselton-Margaret River Regional Airport (i.e. the 230 ha total proposed action area minus the 25 ha within Lots 57 and 591 that will not form part of the airport but will be subject to vegetation clearing and/or pruning for changes to the OLS).

The remaining areas within the proposed action area will comprise open grassed areas of the airfield, pavements and buildings, none of which will have fertilisers applied. The open grassed areas of the airfield, which comprise over 90% of the proposed action area, are neither irrigated nor fertilised, being maintained by mechanical mowing and slashing, with no grazing of cattle or other animals permitted due to aviation safety requirements. The 25 ha portion of the proposed action area that lies within Lots 57 and 591 south of the airport will be subject to vegetation clearing and/or pruning due to the proposed action but will not have any fertilisers applied as part of the proposed action.

Assuming that 5 ha of the proposed action area has landscaping, and assuming a conservative nutrient loading of 125 kg/ha/yr TN and 35 kg/ha/yr TP estimated for recreation reserves (DoW 2009), the total nutrient loading would be 625 kg/yr TN and 175 kg/yr TP, or an average of 3 kg/ha/yr TN and 0.85 kg/ha/yr TN over the proposed action area. This nutrient loading rate, which is conservative, is low compared to the average nutrient loading from cattle grazing and other agricultural activities (13 kg/ha/yr TN and 12 kg/ha/yr TP) within the Vasse Estuary catchment. The proportion of nutrients that would leach or runoff from landscaping areas would be minimised through use of soil amendment and planting of native species, in contrast to the wider agricultural nutrient loading in the Vasse Estuary catchment which is broadscale and does not involve such treatments.

### ***Acid sulphate soils***

The Proponent engaged Golder Associates (2016) to conduct a geotechnical and preliminary acid sulphate soil (ASS) investigation for the proposed action area. A copy of the report is provided in Attachment 2 and a summary of their findings presented below.

Golder Associates (2016) noted that the area was described as "*Class 2 – Moderate to low risk of ASS occurring within 3 m of natural surface but high to moderate risk of ASS beyond 3 m of the natural surface*" in the ASS risk maps compiled by the WA Department of Environment Regulation (DER).

The preliminary investigation was undertaken in January 2016 and included 34 test pits extending to depths of 0.6 to 2.5 m below surface. The test pits indicated soils comprising fine to medium grained sand, clayey sands and areas of variably cemented sand (coffee rock) across the proposed action area. Depth to groundwater was measured as being shallow as 1.1 metres below the surface, but would be expected to rise to shallower depths during the late Spring period.

ASS field screening was conducted on 53 primary samples and 6 duplicate samples. Of these, a total of 11 samples recorded  $pH_F$  of 5.0 or below and two samples recorded  $pH_{FOX}$  below 3. Golder Associates (2016) inferred that the risk of potential ASS (PASS) was medium for one sample and low for the remaining samples.

Based on the ASS field screening results and subsurface materials encountered, a Chromium Suite of analysis was conducted for 20 primary samples. Of the 20 samples analysed, three samples recorded Net Acidity concentrations above the DER action criterion of 0.03% Sulphur (Golder Associates 2016).

Golder Associates (2016) concluded that PASS is likely to occur in soils below the groundwater table and within cemented sands (coffee rock).

Excavation works for the proposed action area are likely to be relatively shallow (less than one metre depth) as they will relate primarily to pavements, single storey building foundations, and shallow trenching for water and power reticulation. Stormwater drainage will typically involve shallow vegetated and open unlined drains that maximise infiltration. Sewer



reticulation will be limited to the vicinity of buildings that discharge into an on-site aerobic treatment unit (ATU) and effluent irrigation system, with no deep sewerage to be used for the proposed action. There may be areas of excavation that extend below one metre depth, including the potential for deepening of the existing stormwater drains on either side of and to the south of the runway, as well as earthworks associated with expansion of the wet retention basin in the south-west of the proposed action area.

The extent of the excavations within the proposed action area has not yet been determined, however all areas likely to encounter the groundwater table or areas of PASS will be subject to further ASS investigation to confirm the presence or absence of PASS. If the presence of PASS is confirmed within these excavation areas then an ASS management plan (ASSMP) will be developed in accordance with the WA DER guidelines and subject to the review and approval of the WA DER prior to implementation.

### ***Sediment and hydrocarbon loading from proposed action***

The potential for sediment and hydrocarbon pollution from the proposed action will be significantly minimised through the following measures:

- Mobile spill capture equipment will be maintained at the aprons to be used in the event of a spill of fuel or hydraulic oil from aircraft. Due to the flat grade and spatial extent of the aprons this will capture the majority of spills before they can flow off the aprons.
- Triple interceptors will be installed on the aprons to capture any spills not reached in time by mobile spill capture equipment, which may occur for large spills during rainfall events. The triple interceptors will thus prevent major spills from entering the stormwater drainage system.
- The fuel farm will be designed, constructed and licensed in accordance with the WA *Dangerous Goods Safety Act 2004*, including leak prevention measures such as impermeable bunding.
- Vegetated drainage systems (e.g. swales) will be used to convey stormwater from paved areas such as access roads and carparks, which will promote infiltration of stormwater and capture of sediments that may contain adsorbed hydrocarbons.
- Stormwater from the western two thirds of the airport, including all access roads, carpark, aprons and taxiways, will drain into a wet retention basin located in the south-west corner along Vasse Highway. The wet detention basin will allow for settling of sediments that may contain adsorbed hydrocarbons.
- Erosion and sediment control plan will be implemented during construction.

---

### **3.1 (d) Listed threatened species and ecological communities**

## Description

### Threatened Ecological Communities

A search of the DotE EPBC Act protected matters search tool identified two threatened ecological communities as likely to occur within 5 km of the proposed action area (Attachment 3), as listed in Table 4.

**Table 4: EPBC Act listed threatened ecological communities potentially occurring in the proposed action area**

Name	EPBC Status
Claypans of the Swan Coastal Plain	Critically Endangered
Subtropical and Temperate Coastal Saltmarsh	Vulnerable

### Flora

A search of the DotE EPBC Act protected matters search tool identified a total of 18 listed threatened flora species as having the potential to occur within 5 km of the proposed action area (Attachment 3), as presented in Table 5 with an assessment of the likelihood of their occurrence.

**Table 5: EPBC Act listed flora species potentially occurring in the proposed action area**

Species Name	Likelihood of occurrence	Comment
<i>Andersonia gracilis</i> Slender Andersonia Slender Andersonia	Unlikely	<p>The species occurs in damp black, sandy clay flats near swamps in open low heath with <i>Calothamnus hirsutus</i> (hairy clawflower), <i>Verticordia densiflora</i> (compact featherflower), <i>Kunzea recurva</i> (recurved kunzea) and <i>Banksia telmatiaea</i> over sedges.</p> <p>Vegetation within the proposed action area is mostly completely degraded and dominated by <i>Cenchrus</i> and <i>Cynodon</i> grassland with some <i>Hypochaeris radicata</i> herbland. There are isolated <i>Corymbia calophylla</i> (Marri) trees and limited patches of <i>Juncus pallidus</i> open sedgeland, <i>Corymbia calophylla</i> (Marri) woodland, mixed open woodland of <i>Eucalyptus gomphocephala</i>, <i>Agonis flexuosa</i> and <i>Melaleuca raphiophylla</i>, and mixed woodland of planted Eucalyptus species. Therefore, the proposed action area is unlikely to contain habitat suitable for this species.</p> <p>This species was not recorded during the flora survey of the proposed action area (Natural Area Holdings 2016).</p>
<i>Banksia nivea</i> subsp. <i>Ugilliosa</i> Swamp Honey-pot	Unlikely	<p>The species occurs in two locations including Busselton and on the Scott River east of Augusta in red, sandy, shallow loams over ironstone in thick scrub. The proposed action area is unlikely to contain suitable habitat for this species.</p> <p>This species was not recorded during the flora survey of the proposed action area (Natural Area Holdings 2016).</p>
<i>Banksia squarrosa</i> subsp. <i>Argillacea</i> Whicher Range Dryandra	Unlikely	<p>The species occurs near Busselton in winter-wet clay over ironstone in open to tall shrubland. The proposed action area is unlikely to contain suitable habitat for this species.</p> <p>This species was not recorded during the flora survey of the proposed action area (Natural Area Holdings 2016).</p>
<i>Brachyscias verecundus</i> Ironstone Brachyscias	Unlikely	<p>The species occurs near Busselton in winter-wet clay over ironstone in open to tall shrubland. The proposed action area is unlikely to contain suitable habitat for this species.</p> <p>This species was not recorded during the flora survey of the proposed action area (Natural Area Holdings 2016).</p>
<i>Caladenia huegelii</i> King Spider-orchid, Grand Spider-orchid, Rusty Spider-orchid	Unlikely	<p>The species occurs in areas of mixed woodland of <i>Eucalyptus marginata</i>, <i>Banksia attenuata</i>, <i>Banksia ilicifolia</i> and <i>Banksia menziesii</i> with scattered <i>Allocasuarina fraseriana</i> and <i>Corymbia calophylla</i> over dense shrubs of <i>Stirlingia latifolia</i>, <i>Hypocalymma robustum</i>, <i>Hibbertia hypericoides</i>, <i>Hibbertia subvaginata</i>, <i>Xanthorrhoea preissii</i>, <i>Adenanthos cuneatus</i> and <i>Conostylis</i> species. Its distribution extends from just north of Perth to the Busselton area, usually located within 20 km of the coast and in soils usually consisting of deep grey-white sand associated with the Bassendean sand-dune system. Throughout its range the species also tends to favour areas of dense undergrowth.</p> <p>The proposed action area is unlikely to contain suitable habitat for this species.</p> <p>This species was not recorded during the flora survey of the proposed action area (Natural Area Holdings 2016).</p>
<i>Caladenia procera</i> Carbunup King Spider Orchid	Unlikely	<p>This species is endemic to a small area near Carbanup Reserve approximately 15 km southwest of Busselton in Jarrah, Marri and Peppermint woodland on alluvial sandy-clay loam flats amongst dense heath and sedges or low dense shrubs (DotE 2016).</p> <p>The proposed action area does not occur within the known range of the species.</p> <p>This species was not recorded during the flora survey of the proposed action area (Natural Area Holdings 2016).</p>

<i>Chamelaucium</i> sp. C Coastal Plain Royce's Waxflower	Unlikely	Royce's Waxflower is confined to swamp margins in open Banksia shrubland in winter-wet sandy clay sites on a coastal plain (Brown et al. 1998). It occurs in low woodlands of <i>Eucalyptus rudis</i> , <i>Melaleuca raphiophylla</i> , <i>Astartea fascicularis</i> , or Proteaceous heaths (DotE 2016). The proposed action area is unlikely to contain suitable habitat for this species.  This species was not recorded during the flora survey of the proposed action area (Natural Area Holdings 2016).
<i>Darwinia foetida</i> Mucnea Bell	Unlikely	Mucnea Bell occurs in grey-white sand on swampy, seasonally wet shrublands and has been recorded at three locations near the town of Mucnea. The extent of occurrence of Mucnea Bell is estimated to be 1.2 km <sup>2</sup> and the distance between the most northern and southern populations is approximately 4 km <sup>2</sup> ; therefore, this species is unlikely to occur within the proposed action area.  This species was not recorded during the flora survey of the proposed action area (Natural Area Holdings 2016).
<i>Darwinia whicherensis</i> Abba Bell	Unlikely	Known only from three locations at the base of Whicher Range, in winter-wet shrubland over shallow red clay over ironstone. The proposed action area is unlikely to contain suitable habitat for this species.  This species was not recorded during the flora survey of the proposed action area (Natural Area Holdings 2016).
<i>Diuris micrantha</i> Dwarf bee-orchid	Unlikely	Dwarf bee-orchid is known from four locations (Collie, Yalgorup, Manjimup and Perth) in swamps, drainage lines and seasonally inundated flats in clay soils, which are not characteristic of the proposed action area.  This species was not recorded during the flora survey of the proposed action area (Natural Area Holdings 2016).
<i>Drakea elastic</i> Glossy-leafed Hammer-orchid, Praying Virgin	Unlikely	Occurs on bare patches of white sand over dark sandy loam on low-lying areas near ephemeral lakes, or slopes adjacent to winter wet depressions, swamps and water courses. It is associated with Banksia woodland and scattered Marri and most occur with Kunzea.  The proposed action area is unlikely to contain suitable habitat for this species.  This species was not recorded during the flora survey of the proposed action area (Natural Area Holdings 2016).
<i>Drakea micrantha</i> Dwarf Hammer-orchid	Unlikely	Occurs on cleared firebreaks or open sandy patches that have been disturbed, in grey sands in Jarrah and Sheoak woodland or in association with Banksia.  The proposed action area is unlikely to contain suitable habitat for this species.  This species was not recorded during the flora survey of the proposed action area (Natural Area Holdings 2016).
<i>Gastrolobium papilio</i> Butterfly-leaved Gastrolobium	Unlikely	Butterfly-leaved Gastrolobium is known from one natural population near Busselton and grows in low open, mixed heath. The proposed action area is unlikely to contain suitable habitat for this species.  This species was not recorded during the flora survey of the proposed action area (Natural Area Holdings 2016).
<i>Grevillea elongata</i> Ironstone Grevillea	Unlikely	The Ironstone Grevillea is restricted to the Ruabon-Busselton area of Western Australia, in the Whicher Range (DotE 2016). The proposed action area does not occur within the Whicher Range and is therefore unlikely to contain suitable habitat for this species.  This species was not recorded during the flora survey of the proposed action area (Natural Area Holdings 2016).
<i>Lambertia echinata</i> subsp. <i>occidentalis</i> Western Prickly Honeysuckle	Unlikely	The Western Prickly Honeysuckle is found in southern ironstone communities at the base of the Whicher Range near Busselton, Western Australia (DotE 2016). The proposed action area does not occur within the Whicher Range and is therefore unlikely to contain suitable habitat for this species.  This species was not recorded during the flora survey of the proposed action area (Natural Area Holdings 2016).
<i>Petrophile latericola</i> Laterite Petrophole	Unlikely	This species is found within tall and low heath on winter-wet flats of red sandy-clay over ironstone at the base of Whicher Range and on the Wonnerup-Ruabon rail reserve (DotE 2016). The proposed action area does not occur within the Whicher Range and is therefore unlikely to contain suitable habitat for this species.  This species was not recorded during the flora survey of the proposed action area (Natural Area Holdings 2016).
<i>Synaphea stenoloba</i> Dwellingup Synaphea	Unlikely	Occurs on loamy soils in low lying areas that are occasionally inundated, in association with swamp heath. The proposed action area is unlikely to contain suitable habitat for this species.  This species was not recorded during the flora survey of the proposed action area (Natural Area Holdings 2016).
<i>Verticordia plumose</i> var. <i>vassensis</i> Vasse Featherflower Vasse Featherflower	Unlikely	This species has previously been recorded within the proposed action area (Natural Area Holdings 2016) however the area of the records is completely degraded through previous clearing activities, ongoing grounds maintenance and cattle grazing and no species have been recently recorded at the proposed action area.  Due to the highly degraded nature of the proposed action area it is unlikely to contain suitable habitat for this species.

## Fauna

A search of the DotE EPBC Act protected matters search tool identified a total of 18 listed threatened birds and 2 listed threatened terrestrial mammal species as having the potential to occur within 5 km of the proposed action area (Attachment 3), as presented in Table 5 with an assessment of the likelihood of their occurrence.

**Table 6: EPBC Act listed threatened fauna species potentially occurring in the proposed action area**

Species Name	Likelihood of occurrence	Comment
<b>Birds</b>		
<i>Anous tenuirostris melanops</i> Australian Lesser Noddy	Extremely unlikely	Breeds on islands north of Perth, especially the Abrolhos, and forages on the open ocean. Individuals can be driven onto the mainland during winter storms.
<i>Botaurus poiciloptilus</i> Australasian Bittern	Unlikely	In the region known from large wetlands with extensive reed beds such as the Vasse Wonnerup wetlands, but the proposed action area does not have such wetlands. Individuals could be transient through the proposed action area
<i>Calidris ferruginea</i> Curlew Sandpiper	Potential	The species may occur transiently in very low numbers in the seasonal wetland areas in the north of the proposed action area. The seasonal wetland areas are heavily degraded from cattle trampling and grazing and are not considered an important habitat for the species.
<i>Calyptrorhynchus banksii naso</i> Forest Red-tailed Black-Cockatoo	Potential	Mainly eucalypt forests particularly Jarrah and Marri where it feeds primarily on the Marri seeds, Banksia, Hakea and Erodium sp.  There is vegetation on site that is known as preferred foraging species, of which approximately 4.6 ha and some scattered trees are proposed to be cleared. However the vegetation is in poor condition, with few mature trees present and low amounts of nuts presenting; and no signs of foraging by black cockatoos observed during site survey (Natural Area Holdings 2016).
<i>Calyptrorhynchus baudinii</i> Baudin's Black-Cockatoo	Potential	Mainly eucalypt forests particularly Jarrah and Marri where it feeds primarily on the Marri seeds, Banksia, Hakea and Erodium sp.  There is vegetation on site that is known as preferred foraging species, of which approximately 4.6 ha and some scattered trees are proposed to be cleared. However the vegetation is in poor condition, with few mature trees present and low amounts of nuts presenting; and no signs of foraging by black cockatoos observed during site survey (Natural Area Holdings 2016).
<i>Calyptrorhynchus latirostris</i> Carnaby's Black-Cockatoo	Potential	Forests, woodlands, heathlands, farms; feeds on banksia, hakeas, dryandras and Marri. Breeding occurs in winter/spring mainly in eastern forest and wheatbelt where they can find mature hollow bearing trees to nest in.  There is vegetation on site that is known as preferred foraging species, of which approximately 4.6 ha and some scattered trees are proposed to be cleared. However the vegetation is in poor condition, with few mature trees present and low amounts of nuts presenting; and no signs of foraging by black cockatoos observed during site survey (Natural Area Holdings 2016).
<i>Diomedea epomophora epomophora</i> Southern Royal Albatross	Extremely unlikely	Breeds on sub-antarctic islands and forages on the open ocean. Vagrants may be driven onto the mainland during winter storms.
<i>Diomedea epomophora sanfordi</i> Northern Royal Albatross	Extremely unlikely	Breeds on sub-antarctic islands and forages on the open ocean. Vagrants may be driven onto the mainland during winter storms.
<i>Diomedea exulans amsterdamensis</i> Amsterdam Albatross	Extremely unlikely	Breeds on sub-antarctic islands and forages on the open ocean. Vagrants may be driven onto the mainland during winter storms.
<i>Diomedea exulans exulans</i> Tristan Albatross	Extremely unlikely	Breeds on sub-antarctic islands and forages on the open ocean. Vagrants may be driven onto the mainland during winter storms.
<i>Diomedea exulans (sensu lato)</i> Wandering Albatross	Extremely unlikely	Breeds on sub-antarctic islands and forages on the open ocean. Vagrants may be driven onto the mainland during winter storms.
<i>Macronectes giganteus</i> Southern Giant Petrel	Extremely unlikely	Breeds on sub-antarctic islands and forages on the open ocean. Vagrants may be driven onto the mainland during winter storms.
<i>Macronectes halli</i> Northern Giant Petrel	Extremely unlikely	Breeds on sub-antarctic islands and forages on the open ocean. Vagrants may be driven onto the mainland during winter storms.
<i>Pachyptila turtur subantarctica</i> Fairy Prion (southern)	Extremely unlikely	Breeds on sub-antarctic islands and forages on the open ocean. Vagrants may be driven onto the mainland during winter storms.

<i>Thalassarche cauta cauta</i> Shy Albatross	Extremely unlikely	Breeds on sub-antarctic islands and forages on the open ocean. Vagrants may be driven onto the mainland during winter storms.
<i>Thalassarche cauta steadi</i> White-capped Albatross	Extremely unlikely	Breeds on sub-antarctic islands and forages on the open ocean. Vagrants may be driven onto the mainland during winter storms.
<i>Thalassarche melanophris</i> Black-browed Albatross	Extremely unlikely	Breeds on sub-antarctic islands and forages on the open ocean. Vagrants may be driven onto the mainland during winter storms.
<i>Thalassarche melanophris impavida</i> Campbell Albatross	Extremely unlikely	Breeds on sub-antarctic islands and forages on the open ocean. Vagrants may be driven onto the mainland during winter storms.
<b>Mammals</b>		
<i>Dasyurus geoffroii</i> Chuditch, Western Quoll	Unlikely	Chuditch are known to have occupied a wide range of habitats from woodlands, dry sclerophyll (leafy) forests, riparian vegetation, beaches and deserts. Riparian vegetation appears to support higher densities of Chuditch, possibly because food supply is better or more reliable and better cover is offered by dense vegetation.  Due to the highly degraded nature of the proposed action area it is unlikely to contain suitable habitat for this species.
<i>Pseudocheirus occidentalis</i> Western Ringtail Possum	Unlikely	The Western Ringtail Possum was once located in a variety of habitats including Coastal Peppermint, Coastal Peppermint-Tuart, Jarrah-Marri associations, Sheoak woodland, and eucalypt woodland and mallee. Present populations mostly inhabit Coastal Peppermint-Tuart associations from near Bunbury to Albany. Along the Swan Coastal Plain near Busselton the highest densities occur in habitats with dense, relatively lush vegetation. In these areas the main determinants of suitable habitat for WRP appears to be the presence of <i>Agonis flexuosa</i> either as the dominant tree or as an understorey component of Eucalypt forest or woodland.  Although there are habitat trees ( <i>Agonis flexuosa</i> ) present within the proposed action area, the trees are isolated without understorey and are considered poor habitat.  Accordingly, no suitable habitat for the species was recorded within the proposed action area and the <i>Agonis flexuosa</i> and <i>Corymbia calophylla</i> trees present showed no evidence of dreys or hollows suitable for the species and no scats were present. The <i>Corymbia calophylla</i> woodland present was isolated and did not have a dense canopy cover as it was quite degraded vegetation, thus it was not considered suitable habitat for the species.

A search of the DotE EPBC Act protected matters search tool also identified four listed threatened marine mammal species, four listed threatened marine reptile species and three listed threatened shark species as having the potential to occur within 5 km of the proposed action area (i.e. within Geographe Bay) (Attachment 3). No significant impact is expected on any listed threatened marine fauna species due to the proposed action and these species are not considered further.

## Nature and extent of likely impact

### Clearing of vegetation

In addition to the EPBC protected search tool, a Level 1 flora, vegetation and fauna survey of the proposed action area (Natural Area Holdings 2016, Attachment 4) was undertaken in February 2016. The survey confirmed the following:

- no threatened ecological communities present, with the closest being 1800 m to the north-west of the proposed action area
- no threatened flora species identified during the survey; although 2 records of the species *Verticordia plumosa* var. *Vassensis* have previously been recorded within the proposed action area
- the habitat within the proposed action area was not considered suitable for the Western Ringtail Possum,
- no breeding habitat or nesting hollows were present within the proposed action area for listed threatened black cockatoo species

Although the flora species *Verticordia plumosa* var. *Vassensis* has previously been recorded within the proposed action area, the two records lie within the grassed airfield and adjacent paddock for cattle grazing, with these areas being 'completely degraded'. No individuals of the species are now recorded at these sites and the area remains subject to ongoing mowing/slashing for airfield maintenance and cattle grazing.

The survey findings reflect the fact that the proposed action area comprises vegetation that is largely classified as 'completely degraded' or 'degraded', having been cleared for agriculture and maintained for the existing airport operations through mechanical mowing and slashing.

The proposed action will involve clearing of native vegetation as follows (Figure 6):

- Approximately 20-25 isolated trees along Neville Hyder Drive (Lot 9001 Plan 32476), including *Eucalyptus gomphocephala*, *Agonis felxuosa*, *Melaleuca rhapsiphulla*, *M. viminea* and *M. nesophila* species.
- Approximately ten scattered trees of *Corymbia calophylla* and *Eucalyptus gomphocephala* in a cleared paddock west of the existing airport hangars (within Lot 9001 Plan 32476) and in the cleared paddock south of the runway (Lot 1 Plan 53715).
- *Pallidus juncus* sedgeland in two small seasonal wetlands to the north-west of the runway (Lot 3819 Plan 153196), mapped as 'degraded'.
- Clearing and/or pruning of vegetation for changes to the Obstacle Limitation Surface (OLS) along Vasse Highway (Lot 57 Plan 5398), Acton Park Road and in Lot 591 Plan 126664 south-west of Vasse Highway. This includes up to 4.6 ha of *Corymbia calophylla* (Marri) woodland as well as mixed woodland of planted (eastern states) *Eucalyptus* species, *Allocasuarina* species and *Melaleuca preissiana*. The extent of clearing and/or pruning for changes in the OLS remains to be determined.

The proposed action will result in the potential clearing/pruning of up to 4.6 ha of Marri woodland and approximately ten scattered Marri/Tuart trees that are known as foraging species for black cockatoos. However, the vegetation is in poor condition, with few mature trees present, no known roosting trees in the area, low amounts of nuts presenting, and no signs of foraging by black cockatoos was observed during the site survey (Natural Area Holdings 2016).

No suitable habitat for the Western Ringtail Possum was recorded within the proposed action area and the Peppermint and Marri trees present showed no evidence of dreys or hollows suitable for the species and no scats were present. The Marri Woodland present was isolated and did not have a dense canopy cover as it was quite degraded vegetation, it was not considered suitable habitat for the Western Ringtail Possum (Natural Area Holdings 2016).

The clearing of vegetation for the proposed action is thus not expected to cause significant impacts to listed threatened flora or fauna species.

#### Aircraft disturbance to birds

An assessment of the risk posed by aircraft disturbance to waterbirds is presented in Section 3.1(c).

#### Aircraft collisions with birds

Birdstrike statistics for the existing airport are recorded by the Australian Transport Safety Bureau and presented in Attachment 5. The existing Busselton airport statistics show a total of 25 recorded bird strike incidents (two reported bird strikes are duplicates) from 2005 to 2015 of which the majority have involved single birds and occurred on the Airport precinct, or an average of 2.5 bird strikes per year which is not considered a significant impact to threatened bird species populations.

---

### **3.1 (e) Listed migratory species**

## Description

A search of the DotE EPBC Act protected matters search tool identified a total of 13 listed migratory marine bird species, 2 migratory terrestrial species and 11 migratory wetland bird species as having the potential to occur within 5 km of the proposed action area (Attachment 3), as presented in Table 7 with an assessment of the likelihood of their occurrence.

**Table 7: EPBC Act listed migratory bird species potentially occurring in the proposed action area**

Species Name	Likelihood of occurrence	Comment
<b>Migratory Marine Birds</b>		
<i>Apus pacificus</i> Fork-tailed Swift	Potential	The Fork-tailed Swift is almost exclusively aerial, flying from less than 1 m to at least 300 m above ground and probably much higher. This species is potentially a very occasional summer visitor to the south west but is entirely aerial and largely independent of terrestrial habitats.  The species is relatively common and widespread and occur as an occasional, non-breeding visitor to the proposed action area.
<i>Diomedea epomophora</i> epomophora Southern Royal Albatross	Extremely unlikely	Breeds on sub-antarctic islands and forages on the open ocean. Vagrants may be driven onto the mainland during winter storms.
<i>Diomedea epomophora sanfordi</i> Northern Royal Albatross	Extremely unlikely	Breeds on sub-antarctic islands and forages on the open ocean. Vagrants may be driven onto the mainland during winter storms.
<i>Diomedea exulans amsterdamensis</i> Amsterdam Albatross	Extremely unlikely	Breeds on sub-antarctic islands and forages on the open ocean. Vagrants may be driven onto the mainland during winter storms.
<i>Diomedea exulans exulans</i> Tristan Albatross	Extremely unlikely	Breeds on sub-antarctic islands and forages on the open ocean. Vagrants may be driven onto the mainland during winter storms.
<i>Diomedea exulans (sensu lato)</i> Wandering Albatross	Extremely unlikely	Breeds on sub-antarctic islands and forages on the open ocean. Vagrants may be driven onto the mainland during winter storms.
<i>Macronectes giganteus</i> Southern Giant Petrel	Extremely unlikely	Breeds on sub-antarctic islands and forages on the open ocean. Vagrants may be driven onto the mainland during winter storms.
<i>Macronectes halli</i> Northern Giant Petrel	Extremely unlikely	Breeds on sub-antarctic islands and forages on the open ocean. Vagrants may be driven onto the mainland during winter storms.
<i>Puffinus carneipes</i> Flesh-footed Shearwater,	Extremely unlikely	Breeds on some islands along the south coast of WA and forages on the open ocean. Vagrants may be driven onto the mainland during winter storms
<i>Thalassarche cauta cauta</i> Shy Albatross	Extremely unlikely	Breeds on sub-antarctic islands and forages on the open ocean. Vagrants may be driven onto the mainland during winter storms.
<i>Thalassarche cauta steadi</i> White-capped Albatross	Extremely unlikely	Breeds on sub-antarctic islands and forages on the open ocean. Vagrants may be driven onto the mainland during winter storms.
<i>Thalassarche melanophris</i> Black-browed Albatross	Extremely unlikely	Breeds on sub-antarctic islands and forages on the open ocean. Vagrants may be driven onto the mainland during winter storms.
<i>Thalassarche melanophris impavida</i> Campbell Albatross	Extremely unlikely	Breeds on sub-antarctic islands and forages on the open ocean. Vagrants may be driven onto the mainland during winter storms.
<b>Migratory Terrestrial Species</b>		
<i>Merops ornatus</i> Rainbow Bee-eater	Potential	The Rainbow Bee-eater occurs mainly in open forests and woodlands, shrublands, and in various cleared or semi-cleared habitats, including farmland and areas of human habitation. It usually occurs in open, cleared or lightly-timbered areas that are often, but not always, located in close proximity to permanent water.  The species is a potential seasonal visitor to the proposed action area.
<i>Motacilla cinerea</i> Grey Wagtail	Unlikely	A vagrant to the South West region with one or two birds seen across the entire region in some years.
<b>Migratory Wetland Species</b>		

<i>Ardea alba</i> ( <i>Ardea modesta</i> ) Great Egret, White Egret, Eastern Great Egret	Possible	<p>The Eastern Great Egret has been reported in a wide range of wetland habitats (for example inland and coastal, freshwater and saline, permanent and ephemeral, open and vegetated, large and small, natural and artificial). The species usually frequents shallow waters.</p> <p>The species may occur transiently in very low numbers in the seasonal wetland areas in the north of the proposed action area. The seasonal wetland areas are heavily degraded from cattle trampling and grazing and is not considered an important habitat for the species.</p>
<i>Ardea ibis</i> Cattle Egret	Possible	<p>The Cattle Egret occurs in tropical and temperate grasslands, wooded lands and terrestrial wetlands. It has occasionally been seen in arid and semi-arid regions; however, this is extremely rare. High numbers have been observed in moist, low-lying poorly drained pastures with an abundance of high grass; it avoids low grass pastures.</p> <p>The Cattle Egret uses predominately shallow, open and fresh wetlands including meadows and swamps with low emergent vegetation and abundant aquatic flora. They have sometimes been observed in swamps with tall emergent vegetation.</p> <p>The species may occur transiently in very low numbers in the seasonal wetland areas in the north of the proposed action area. The seasonal wetland areas are heavily degraded from cattle trampling and grazing and is not considered an important habitat for the species.</p>
<i>Calidris acuminata</i> Sharp-tailed Sandpiper	Seasonal visitor in very small numbers	Occurs on the nearby Vasse-wonnerup estuary where it is a seasonal (spring to early autumn) visitor. Favours tidal mudflats so the proposed action area does not provide suitable habitat, but small numbers may visit the seasonal wetlands in the north-west of the proposed action area.
<i>Calidris ferruginea</i> Curlew Sandpiper	Likely intermittently in small numbers	Occurs on the nearby Vasse-Wonnerup wetlands where it is a seasonal (spring to early autumn) visitor; formerly in large numbers but currently in small numbers due to global population decline. Favours tidal mudflats so the proposed action area does not provide suitable habitat, but small numbers may visit the seasonal wetlands in the north-west of the proposed action area.
<i>Calidris ruficollis</i> Red-necked Stint	Seasonal visitor in small numbers	Occurs on the nearby Vasse-wonnerup estuary where it is a seasonal (spring to early autumn) visitor. Favours tidal mudflats so the proposed action area does not provide suitable habitat, but small numbers may visit the seasonal wetlands in the north-west of the proposed action area.
<i>Charadrius bicinctus</i> Double-banded Plover	Unlikely	Migrant from New Zealand that reaches the South West region in very small numbers.
<i>Limosa lapponica</i> Bar-tailed Godwit	Unlikely	Occurs on the nearby Vasse-wonnerup estuary where it is a seasonal (spring to early autumn) visitor. Favours tidal mudflats so the proposed action area does not provide suitable habitat, but small numbers may visit the seasonal wetlands in the north-west of the proposed action area.
<i>Pandion haliaetus</i> Osprey	Individuals may fly overhead occasionally	A marine/estuarine bird of prey that feeds mainly on fish. Nests in large trees near the coast. No habitat within the proposed action area.
<i>Tringa glareola</i> Wood Sandpiper	Regular in summer small numbers	Occurs on the nearby Vasse-Wonnerup wetlands where it is an occasional seasonal (spring to early autumn) visitor. Favours shallows and mudflats, especially of freshwater wetlands, so may visit the seasonal wetlands in the north-west of the proposed action area.
<i>Tringa nebularia</i> Common Greenshank,	Occasional summer visitor in small numbers	Occurs on the nearby Vasse-Wonnerup wetlands where it is an occasional seasonal (spring to early autumn) visitor. Favours shallows and mudflats, especially of freshwater wetlands, so may visit the seasonal wetlands in the north-west of the proposed action area.
<i>Tringa stagnatilis</i> Marsh Sandpiper	Occasional summer visitor in small numbers	Occurs on the nearby Vasse-Wonnerup wetlands where it is an occasional seasonal (spring to early autumn) visitor. Favours shallows and mudflats, especially of freshwater wetlands, so may visit the seasonal wetlands in the north-west of the proposed action area.

A search of the DotE EPBC Act protected matters search tool identified a total of 6 listed migratory marine species (turtles and manta rays) as having the potential to occur within 5 km of the proposed action area (Attachment 3). No significant impact is expected on any listed migratory marine species due to the proposed action and these species are not considered further.



### **Nature and extent of likely impact**

#### Aircraft disturbance to birds

An assessment of the risk posed by aircraft disturbance to waterbirds is presented in Section 3.1(c).

#### Aircraft collisions with birds

Birdstrike statistics for the existing airport are recorded by the Australian Transport Safety Bureau and presented in Attachment 5. The existing Busselton airport statistics show a total of 25 recorded bird strike incidents (two reported bird strikes are duplicates) from 2005 to 2015 of which the majority have involved single birds and occurred on the Airport precinct, or an average of 2.5 bird strikes per year which is not considered a significant impact to threatened bird species populations.

---

### **3.1 (f) Commonwealth marine area**

(If the action is in the Commonwealth marine area, complete 3.2(c) instead. This section is for actions taken outside the Commonwealth marine area that may have impacts on that area.)

#### **Description**

The proposed action will not be taken within or adjacent to Commonwealth marine areas.

### **Nature and extent of likely impact**

There are unlikely to be any impacts on Commonwealth marine areas as a result of this proposed action.

---

### **3.1 (g) Commonwealth land**

(If the action is on Commonwealth land, complete 3.2(d) instead. This section is for actions taken outside Commonwealth land that may have impacts on that land.)

#### **Description**

The proposed action will not be taken on, or adjacent to, Commonwealth land.

### **Nature and extent of likely impact**

There are unlikely to be any impacts on Commonwealth land as a result of this proposed action.

---

### 3.1 (h) The Great Barrier Reef Marine Park

#### Description

The proposed action is not located within or nearby the Great Barrier Reef Marine Park.

#### Nature and extent of likely impact

There will be no impact to the Great Barrier Reef Marine Park as a result of the proposed action

---

### 3.1 (i) A water resource, in relation to coal seam gas development and large coal mining development

#### Description

The proposed action will not impact upon a water resource in relation to coal seam gas development.

#### Nature and extent of likely impact

The proposed action will not impact upon a water resource in relation to coal seam gas development.

---

## 3.2 Nuclear actions, actions taken by the Commonwealth (or Commonwealth agency), actions taken in a Commonwealth marine area, actions taken on Commonwealth land, or actions taken in the Great Barrier Reef Marine Park

3.2 (a)	Is the proposed action a nuclear action?	<input checked="" type="checkbox"/>	No
		<input type="checkbox"/>	Yes (provide details below)
If yes, nature & extent of likely impact on the whole environment			
3.2 (b)	Is the proposed action to be taken by the Commonwealth or a Commonwealth agency?	<input checked="" type="checkbox"/>	No
		<input type="checkbox"/>	Yes (provide details below)
If yes, nature & extent of likely impact on the whole environment			
3.2 (c)	Is the proposed action to be taken in a Commonwealth marine area?	<input checked="" type="checkbox"/>	No
		<input type="checkbox"/>	Yes (provide details below)
If yes, nature & extent of likely impact on the whole environment (in addition to 3.1(f))			
3.2 (d)	Is the proposed action to be taken on Commonwealth land?	<input checked="" type="checkbox"/>	No
		<input type="checkbox"/>	Yes (provide details below)
If yes, nature & extent of likely impact on the whole environment (in addition to 3.1(g))			
3.2 (e)	Is the proposed action to be taken in the Great Barrier Reef Marine Park?	<input checked="" type="checkbox"/>	No
		<input type="checkbox"/>	Yes (provide details below)
If yes, nature & extent of likely impact on the whole environment (in addition to 3.1(h))			

### 3.3 Other important features of the environment

#### 3.3 (a) Flora and fauna

The Level 1 flora and vegetation survey report is provided in Attachment 4, with findings relevant to Matters of National Environmental Significance presented in 3.1(d). The findings of the survey are that the vegetation within the proposed action area is 'completely degraded' or 'degraded', with the structure of the vegetation no longer intact and the area completely or almost completely without native species (Natural Area Holdings 2016). The survey found that along Vasse Highway and Acton Park Road the vegetation is in a 'degraded', 'good' or 'very good' condition.

The survey found a total of 63 flora species from 24 families, with 33 being native species and 30 being introduced species (Natural Area Holdings 2016). Literature review also indicated the potential for 87 vertebrate fauna species to occur in the vicinity of the proposed action area, including three frogs, 33 reptiles, 54 birds and eight mammals; with one introduced bird and five introduced mammals (Green Iguana 2011).

#### 3.3 (b) Hydrology, including water flows

The proposed action area comprises gently undulating terrain (slope 1 in 80, CMPS&F 1995) and partially comprises a palusplain dampland that is mapped by the WA DP&W as a 'multiple use' wetland. Multiple use wetlands are classified as significantly degraded and possessing few natural attributes and limited human-use interest (EPA 1993). The proposed action area is drained via a network of open unlined drains that discharge to the south-west into the Vasse Diversion Drain, which flows to the west, intercepting and diverting flow from the Upper Vasse River at approximately 3 km to the west of the proposed action area, before flowing to the north-west and discharging directly into Geographe Bay (see Figure 1).

The Vasse Diversion Drain diverts the majority of the flow from its catchment (including the Upper Vasse River and Upper Sabina River) into Geographe Bay, bypassing the Vasse Estuary, however a low flow culvert permits some flow from the drain to discharge into the Lower Vasse River, which flows into the Vasse Estuary.

The proposed action area is underlain by superficial formations comprising the Bassendean sands and Guildford formation. The Bassendean sands comprise a discontinuous unconfined water table aquifer that is directly recharged by rainfall infiltration, whereas the underlying Guildford formation forms a multiple-layer, inhomogeneous, anisotropic and, in places, semi-confined aquifer. The depth to groundwater is as shallow as 1.1 m (Golder Associates 2016) within the proposed action area and may rise to shallower depths in the late spring. The general direction of groundwater flow in the superficial formations is to the north-west towards Geographe Bay (Water Corporation 2005). The superficial formations are underlain by confined aquifers of the Leederville and Yarragadee Formations, which are recharged in the Blackwood Plateau that lies approximately 10 km south of the proposed action area.

#### 3.3 (c) Soil and Vegetation characteristics

The proposed action area is situated on the Quaternary age Bassendean sands and comprises shallow sand over clay soils which commonly occur within the depressions of the undulating terrain, with well drained deep bleached grey sands on the slightly higher ground (CMPS&F 1995). The Bassendean sands form a system of relic aeolian dunes extending approximately 10 km between the Whicher scarp to the south and alluvial plains, limestone derived sands and estuarine landforms to the north.

The proposed action area is located within the Abba plain landform, which is typically associated with Marri, Jarrah and Banksia open forest or Marri Woodland. Common species included in this vegetation complex include *Melaleuca preissiana*, *M. raphiophylla*, *Nuytsia floribunda*, *Kingia australis*, *Persoonia longifolia*, *Banksia grandis*, *Regelia ciliata*, *Beaufortia sparsa*, *Leptospermum ellipticum*, *Hakea varia*, *Acacia saligna*, *Astartea fascicularis*, *Viminaria juncea* and *Agonis juniperina* (Natural Area Holdings 2016).

The vegetation of the proposed action area has been surveyed by Natural Area Holdings (2016) and is described in detail in Attachment 4. The findings of the survey are that the vegetation within the proposed action area is completely degraded, with the structure of the vegetation no longer intact and the area completely or almost completely without native species. The survey found that along Vasse Highway and Acton Park Road the vegetation is in a 'degraded', 'good' or 'very good' condition.

#### 3.3 (d) Outstanding natural features

There are no outstanding features in the vicinity of the proposed action area.

### **3.3 (e) Remnant native vegetation**

The proposed action area supports planted native vegetation along Neville Hyder Drive and the existing airport terminal and hangars, with the vicinity of the runway being completely cleared of native vegetation, and approximately 10 scattered trees in the cleared paddocks located to the west and south of the runway. Native vegetation is also located to the south of the airport along the Vasse Highway and Acton Park Road, some of which may be remnant.

### **3.3 (f) Gradient (or depth range if action is to be taken in a marine area)**

The proposed action area ranges in elevation from approximately 15 to 20 mAH. The general slope of the proposed action area is 1 in 80 (CMPS&F 1995).

### **3.3 (g) Current state of the environment**

The proposed action area comprises an existing airport and cleared agricultural land to the north and south. Accordingly the area is almost completely cleared of native vegetation, with approximately 10 scattered trees in cleared paddocks to the west and south of the runway and planted native species along Neville Hyder Drive. Of the 63 species identified within the proposed action area, 30 species were introduced plants. There are no weeds of national significance recorded however there are two species listed as having medium to high control priority with the WA DPaw, namely Blue Lupin and Watsonia.

The proposed action area has a gentle undulating landform covered in introduced grasses and there are no substantial areas of soil erosion currently present.

### **3.3 (h) Commonwealth Heritage Places or other places recognised as having heritage values**

Not applicable.

### **3.3 (i) Indigenous heritage values**

A desktop heritage survey (Brad Goode 2013) concluded that there are no recorded heritage sites within the proposed action area and it is unlikely that un-recorded heritage sites exist in the proposed action area. The Proponent is consulting with the WA Department of Aboriginal Affairs (DAA) regarding any heritage issues that may be present and management requirements to be undertaken as part of the proposed action, which will be incorporated into the referral of the proposed action to the WA EPA under the EP Act.

### **3.3 (j) Other important or unique values of the environment**

There are no other important or unique values known in the proposed action area.

### **3.3 (k) Tenure of the action area (eg freehold, leasehold)**

Lot 9001 is freehold land owned by the City of Busselton for the purposes of the existing airport. Lot 1 to the south is freehold land owned by the Water Corporation, which is currently in the process of being acquired by the City of Busselton. Lot 3819 to the north is freehold land owned by R & S Manning and is proposed to be subdivided to excise a portion for acquisition by the City of Busselton.

### **3.3 (l) Existing land/marine uses of area**

Lot 9001 is used for the existing airport. Lot 1 to the south and Lots 3819 and 203 to the north are used for cattle grazing.

### **3.3 (m) Any proposed land/marine uses of area**

Lot 9001 is zoned Special purpose: Busselton Regional Airport under Town Planning Scheme No. 21. Lot 1 to the south and Lot 3819 to the north are currently zoned for Agriculture under Town Planning Scheme No. 21, however upon acquisition by the City of Busselton the lots will be rezoned for Special purpose: Busselton Regional Airport.

## 4 Environmental outcomes

### Wetlands of International Importance (declared Ramsar wetlands)

The proposed action will result in the introduction of RPT and freight operations up to Code 4C aircraft. The frequency and flight paths of the RPT/freight flights remains uncertain, however there is the potential for some RPT/freight flights to occur over the Vasse-Wonnerup wetlands. Based on the current forecast it is expected that, after 20 years of operations (i.e. 2038/39), on average 4.3 RPT/freight movements per day could occur, some (but potentially not all) of which may overfly the wetlands. Based on aircraft noise modelling, the RPT/freight flights are estimated to have maximum noise levels over the Wonnerup Estuary of 65-78 dB(A), compared to an estimated 60-70 dB(A) for existing closed charter (FIFO) flights over the wetlands, or an increase of 5-8 dB(A).

The newly introduced RPT/freight flights over the Vasse-Wonnerup wetlands have the potential to cause intermittent disturbance to waterbirds, the impacts of which are not expected to be significant on the basis of literature review findings, the limited frequency of the RPT/freight flights (estimated at up to 4.3 movements per day as of 2038/39), and the expected altitude of and noise levels generated by the RPT/freight flights as they cross the Vasse-Wonnerup wetlands. This is consistent with the findings of impact assessments undertaken for expansion projects at Brisbane Airport, Sunshine Coast Airport and RAAF Williamtown, which indicated that the more frequent jet aircraft operations at those aerodromes did not pose a significant impact to waterbirds at nearby Ramsar sites, nor were additional monitoring and management actions proposed for waterbirds as part of the expansion projects.

The proposed action will result in an expansion of buildings and paved areas at the existing airport, and an expansion of the landscaping associated with landside entrance and access roads, carparks and the terminal. The proposed action area is expected to generate very low nutrient, sediment and hydrocarbon pollution loads to the Vasse-Wonnerup wetlands due to the following:

- approximately 70% of the flow and any associated pollutants from the proposed action area are expected to bypass the Vasse-Wonnerup Ramsar wetlands via the Vasse Diversion Drain, with only 30% of stormwater from the proposed action area expected to discharge to the Vasse-Wonnerup Ramsar wetlands
- limited landscaping area (approximately 2.5% of the total area) with the remaining area including open grassed airfield having zero application of fertilisers
- use of native species and soil amendment for landscaping, as per City of Busselton guidelines and specifications
- vegetated drainage systems and a wet retention basin to capture sediment and pollutants from paved areas
- mobile spill capture systems and triple interceptors to capture spills from aircraft apron
- licensed fuel farm incorporating leak prevention and capture features
- WA DER approved acid sulphate soil management plan to be implemented during construction

The extent of nutrient loading from the proposed action area will be a small fraction (in both absolute and relative terms) of the nutrient loading generated from surrounding agricultural properties that apply fertiliser for the purposes of beef and dairy cattle grazing and hay/silage growing. The nutrient loading will be limited to landscaping areas on the landside and will be minimised through use of soil amendment and selection of native species, as per City of Busselton guidelines and standards for landscaping.

Accordingly stormwater runoff from the proposed action is not expected to cause significant impacts to the Vasse-Wonnerup wetlands.

### Listed Threatened Species and Ecological Communities

The proposed action will result in potentially the clearing/pruning of up to 4.6 ha of vegetation and approximately ten scattered trees that are known as foraging species for black cockatoos. However, the vegetation is in poor condition, with few mature trees present, no known roosting trees in the area, low amounts of nuts presenting, and no signs of foraging by black cockatoos was observed during the site survey (Natural Area Holdings 2016).

No suitable habitat for the Western Ringtail Possum was recorded within the proposed action area and the Peppermint and Marri trees present showed no evidence of dreys or hollows suitable for the species and no scats were present. The Marri Woodland present was isolated and did not have a dense canopy cover as it was quite degraded vegetation, thus it was not considered suitable habitat for the Western Ringtail Possum.

The clearing of vegetation for the proposed action is thus not expected to cause significant impacts to listed threatened species.

No threatened ecological communities are present within the proposed action area and no threatened ecological communities are expected to be impacted by the proposed action.

## Listed Migratory Species

The proposed action will result in the clearing of vegetation and infilling of seasonal wetlands that are generally almost completely degraded or degraded and presents very limited habitat for listed migratory bird species. The proposed action will generate negligible additional pollution loads to Geographe Bay and thus pose negligible risk of impacting marine migratory species.

The proposed action is thus not expected to cause significant impacts to listed migratory species.

## 5 Measures to avoid or reduce impacts

The Proponent has a voluntary 'Fly Neighbourly Agreement' in place for the existing airport with the key objective being for aircraft operators to avoid noise sensitive premises as far as is practical, within the limits of weather, safety and economic constraints. This agreement will be extended to include the Vasse-Wonnerup system as a noise sensitive area, including the sensitivity of the Wonnerup Estuary during the late winter/early spring breeding season for Black Swans. The Proponent will provide awareness to all flight operators of the sensitivity of the Vasse-Wonnerup system, particularly during the late winter/early spring period, and will promote the Fly Neighbourly Agreement to the FIFO and RPT/freight flight operators.

The Proponent will consult with Air Services Australia in the design of Departure and Approach Procedures to seek opportunities to minimise the length of flight paths over the Vasse-Wonnerup wetlands, for incorporation into the En Route Supplement Australia (ERSA) so that they may be considered by flight operators.

The Proponent will minimise nutrient, sediment and hydrocarbon pollution loads to the Vasse-Wonnerup wetlands through to the following:

- limit fertiliser application to landscaping of landside entrance and access roads, carparks and terminal building
- use native species and soil amendment for landscaping, as per City of Busselton guidelines and specifications
- use vegetated drainage systems and a wet retention basin to capture sediment and pollutants from paved areas
- use mobile spill capture systems and install triple interceptors to capture spills from aircraft apron
- design, construct and licence fuel farm in accordance with WA *Dangerous Goods Safety Act 2004*
- implement an acid sulphate soil management plan during construction, to the approval of the WA DER
- implement an erosion and sediment control plan during construction.

Landscaping works for the landside entrance and access roads, carparks and terminal building will comprise native species selected to minimise irrigation and fertiliser requirements and provide habitat for native fauna.

The Proponent will minimise other environmental impacts during construction through an environmental management plan that addresses the following:

- protection of native flora and fauna during clearing and ground disturbance, including restricting clearing to designated areas and undertaking monitoring during clearing activities
- managing waste to ensure food scraps are not accessible to attract native fauna and feral animals
- providing appropriate training and induction to educate all staff in relation to fauna protection requirements.

## 6 Conclusion on the likelihood of significant impacts

Identify whether or not you believe the action is a controlled action (ie. whether you think that significant impacts on the matters protected under Part 3 of the EPBC Act are likely) and the reasons why.

### 6.1 Do you THINK your proposed action is a controlled action?

<input checked="" type="checkbox"/>	No, complete section 5.2
<input type="checkbox"/>	Yes, complete section 5.3

### 6.2 Proposed action IS NOT a controlled action.

The proposed action is not likely to have a significant impact on matters protected under the EPBC Act.

The proposed RPT/freight flights over the Vasse-Wonnerup wetlands have the potential to cause intermittent disturbance to waterbirds, however the impacts of which are not expected to not be significant on the basis of literature review findings, the limited frequency of the RPT/freight flights (an average of 4.3 movements per day after 20 years, some of which will overfly the wetlands), and the expected altitude of and noise levels generated by the RPT/freight flights as they cross the Vasse-Wonnerup wetlands.

The proposed action area is expected to generate very low nutrient, sediment and hydrocarbon pollution loads to the Vasse-Wonnerup wetlands as only 30% of the site's surface water is expected to discharge into the wetlands. Fertiliser application will be limited to landscaping on landside areas (approximately 2.5% of the airport area), with the grassed airfield having zero fertiliser application. The nutrient loading from the proposed action area will be a small fraction (in absolute and relative terms) of the loading from agricultural lands in the vicinity.

The proposed action will result in the clearing/pruning of up to 4.6 ha of vegetation and approximately ten scattered trees that are known as foraging species for black cockatoos. However, the vegetation is in poor condition, with few mature trees present, no known roosting trees in the area, low amounts of nuts presenting, and no signs of foraging by black cockatoos.

No suitable habitat for the Western Ringtail Possum was recorded within the proposed action area and the Peppermint and Marri trees present showed no evidence of dreys or hollows suitable for the species and no scats were present. The Marri Woodland present was isolated and did not have a dense canopy cover as it was quite degraded vegetation, thus it was not considered suitable habitat for the Western Ringtail Possum.

The clearing of vegetation for the proposed action is thus not expected to cause significant impacts to listed threatened species.

No threatened ecological communities are present within the proposed action area and no threatened ecological communities are expected to be impacted by the proposed action.

### 6.3 Proposed action IS a controlled action

Type 'x' in the box for the matter(s) protected under the EPBC Act that you think are likely to be significantly impacted. (The 'sections' identified below are the relevant sections of the EPBC Act.)

#### Matters likely to be impacted

<input type="checkbox"/>	World Heritage values (sections 12 and 15A)
<input type="checkbox"/>	National Heritage places (sections 15B and 15C)
<input type="checkbox"/>	Wetlands of international importance (sections 16 and 17B)
<input type="checkbox"/>	Listed threatened species and communities (sections 18 and 18A)
<input type="checkbox"/>	Listed migratory species (sections 20 and 20A)
<input type="checkbox"/>	Protection of the environment from nuclear actions (sections 21 and 22A)
<input type="checkbox"/>	Commonwealth marine environment (sections 23 and 24A)
<input type="checkbox"/>	Great Barrier Reef Marine Park (sections 24B and 24C)



	A water resource, in relation to coal seam gas development and large coal mining development (sections 24D and 24E)
	Protection of the environment from actions involving Commonwealth land (sections 26 and 27A)
	Protection of the environment from Commonwealth actions (section 28)
	Commonwealth Heritage places overseas (sections 27B and 27C)

## 7 Environmental record of the responsible party

**NOTE:** If a decision is made that a proposal needs approval under the EPBC Act, the Environment Minister will also decide the assessment approach. The EPBC Regulations provide for the environmental history of the party proposing to take the action to be taken into account when deciding the assessment approach.

	Yes	No
<p><b>7.1 Does the party taking the action have a satisfactory record of responsible environmental management?</b></p> <p><b>Provide details</b></p> <p>The City of Busselton has an Environmental Policy and Environmental Strategies in place to guide environmental management and achieve improved community involvement and measures to increase environmental outcomes for the Council, community and other stakeholders.</p> <p>The City of Busselton has previously developed and operated the existing Busselton Regional Airport to the satisfaction of the WA EPA, including the development and implementation of a Noise Management Plan that was subject to community and stakeholder consultation.</p> <p>Through these management tools the City of Busselton demonstrates a commitment towards continuous improvement in environmental management and progress towards creating a sustainable balance between environmental, social and economic values in the City.</p>	✓	
<p><b>7.2 Has either (a) the party proposing to take the action, or (b) if a permit has been applied for in relation to the action, the person making the application - ever been subject to any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources?</b></p> <p><b>If yes, provide details</b></p>		✓
<p><b>7.3 If the party taking the action is a corporation, will the action be taken in accordance with the corporation's environmental policy and planning framework?</b></p> <p><b>If yes, provide details of environmental policy and planning framework</b></p> <p>The proposed action would be carried out in line with the City of Busselton's Environment Policy 030, the Environment Strategy, the Shire of Busselton District Town Planning Scheme 21, the Busselton Airport Structure Plan, and the airport Noise Management Plan and Fly Neighbourly Agreement.</p>	✓	
<p><b>7.4 Has the party taking the action previously referred an action under the EPBC Act, or been responsible for undertaking an action referred under the EPBC Act?</b></p> <p><b>Provide name of proposal and EPBC reference number (if known)</b></p> <ul style="list-style-type: none"> <li>• (2013/6830) Busselton Foreshore Redevelopment– City of Busselton</li> <li>• (2010/5490) Aerial Application of Laticiding and Barrier Fogging in the Vasse Wonnerup Wetland, WA – Shire of Busselton, Department of Health</li> <li>• (2010/5593) Aerial Application of Laticide to Vasse-Wonnerup Wetlands</li> <li>• (2008/4439) Develop Trails and a Wetlands Demonstration Site and Centre – Shire of Busselton</li> <li>• (2005/2113) Upgrade of Ford Road – Shire of Busselton</li> <li>• (2005/1952) Aerial Mosquito Spraying Vasse-Wonnerup System – Shire of Busselton, Department of Agriculture and Forestry</li> </ul>	✓	

## 8 Information sources and attachments

(For the information provided above)

### 8.1 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, February 2016.

Brad Good & Associates, 2013, *Report of a desktop Aboriginal heritage survey of the Busselton Regional Airport Development Plan in the South West Region, Western Australia*, prepared for the City of Busselton, January 2013.

CMPS&F, 1995, *Proposed Busselton Regional Aerodrome, Consultative Environmental Review*, April 1995.

Department of the Environment (DotE) 2016, Species Profiles and Threats Database, [Online], Australian Government. Available from: <http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl> [8 March 2016].

Environmental Protection Authority, 1993, *A Guide to Wetland Management in the Perth and Near Perth Swan Coastal Plain Area, an update to EPA Bulletin 374*, EPA Bulletin 683, July 1993.

Golder Associates, 2016, *Geotechnical and preliminary acid sulphate soils investigation, Busselton Margaret River Airport Redevelopment Project*, submitted to City of Busselton, February 2016.

Green Iguana, 2011, *Fauna values of the Busselton Regional Airport expansion area*, for the Shire of Busselton, May 2011.

To70 Aviation (Australia), 2015, Noise modelling report, Busselton-Margaret River Airport, prepared for the City of Busselton, December 2015.

Water Corporation, 2005, *South West Yarragadee Hydrogeological Investigations and Evaluation, Southern Perth Basin*, Infrastructure Planning Branch, Planning and Development Division, December 2005.

### 8.2 Reliability and date of information

Information regarding the presence of MNES was obtained through an EPBC Protected Matters Search of the proposed action area, conducted in February 2016. This is in addition to a literature review and risk assessment of waterbird disturbance (Bamford Consulting 2016), Level 1 flora and vegetation survey (Natural Area Holdings 2016) and an acid sulphate soil investigation (Golder Associates 2016), all of which have been undertaken by qualified technical specialists.

### 8.3 Attachments

Figure 1: Busselton-Margaret River Regional Airport and Surrounds

Figure 2: Indicative Flight Paths – Runway 03

Figure 3: Indicative Flight Paths – Runway 21

Figure 4: Existing Busselton Regional Airport Layout

Figure 5: Proposed Busselton-Margaret River Regional Airport

Figure 6: Proposed native vegetation clearing

Attachment 1: Literature Review and Risk Assessment of Disturbance to Waterbirds

Attachment 2: Acid Sulphate Soil Investigation

Attachment 3: EPBC Act Protected Matters Search Report

Attachment 4: Level 1 Flora and Vegetation Survey

Attachment 5: Bird Strike Records

Indicate the documents you have attached. All attachments must be less than three megabytes (3mb) so they can be published on the Department's website. Attachments larger than three megabytes (3mb) may delay the processing of your referral.

		✓ attached	Title of attachment(s)
<b>You must attach</b>	figures, maps or aerial photographs showing the project locality (section 1)	✓	BMRRA EPBC Referral_Figures
	GIS file delineating the boundary of the referral area (section 1)		BMRRA_shapefiles
	figures, maps or aerial photographs showing the location of the project in respect to any matters of national environmental significance or important features of the environments (section 3)	✓	BMRRA EPBC Referral_Figures  BMRRA_EPBC Referral Attachment 1 – Bamford 2016_Vasse Wonnerup Waterbird Review_v4  BMRRA_EPBC Referral Attachment 3 – EPBC PMSR  BMRRA_EPBC Referral Attachment 2 - Golder Geotech_ASS report (minus appendix A)
<b>If relevant, attach</b>	copies of any state or local government approvals and consent conditions (section 2.5)		
	copies of any completed assessments to meet state or local government approvals and outcomes of public consultations, if available (section 2.6)		
	copies of any flora and fauna investigations and surveys (section 3)	✓	BMRRA_EPBC Referral Attachment 4 Natural Area Flora and Vegetation Survey Report  BMRRA_EPBC Referral Attachment 5 – ATSB Birdstrike Records
	technical reports relevant to the assessment of impacts on protected matters that support the arguments and conclusions in the referral (section 3 and 4)	✓	BMRRA_EPBC Referral Attachment 2 - Golder Geotech_ASS report (minus appendix A)
	report(s) on any public consultations undertaken, including with Indigenous stakeholders (section 3)		

## 9 Contacts, signatures and declarations

**NOTE:** Providing false or misleading information is an offence punishable on conviction by imprisonment and fine (s 489, EPBC Act).

Under the EPBC Act a referral can only be made by:

- the person proposing to take the action (which can include a person acting on their behalf); or
- a Commonwealth, state or territory government, or agency that is aware of a proposal by a person to take an action, and that has administrative responsibilities relating to the action<sup>1</sup>.

### Project title:

---

#### 9.1 Person proposing to take action

This is the individual, government agency or company that will be principally responsible for, or who will carry out, the proposed action.

If the proposed action will be taken under a contract or other arrangement, this is:

- the person for whose benefit the action will be taken; or
- the person who procured the contract or other arrangement and who will have principal control and responsibility for the taking of the proposed action.

If the proposed action requires a permit under the Great Barrier Reef Marine Park Act<sup>2</sup>, this is the person requiring the grant of a GBRMP permission.

The Minister may also request relevant additional information from this person.

If further assessment and approval for the action is required, any approval which may be granted will be issued to the person proposing to take the action. This person will be responsible for complying with any conditions attached to the approval.

If the Minister decides that further assessment and approval is required, the Minister must designate a person as a proponent of the action. The proponent is responsible for meeting the requirements of the EPBC Act during the assessment process. The proponent will generally be the person proposing to take the action<sup>3</sup>.

1. Name and Title:

Ms Jennifer May, Manager Commercial Services

2. Organisation (if applicable):

City of Busselton

3. EPBC Referral Number (if known):

Unknown

4: ACN / ABN (if applicable):

87 285 608 991

5. Postal address

Locked Bag 1, Busselton WA 6280

6. Telephone:

(08) 9781 0389

7. Email:

[Jennifer.May@busselton.wa.gov.au](mailto:Jennifer.May@busselton.wa.gov.au)

8. Name of proposed proponent (if not the same person at item 1 above and if applicable):

9. ACN/ABN of proposed

---

<sup>1</sup> If the proposed action is to be taken by a Commonwealth, state or territory government or agency, section 8.1 of this form should be completed. However, if the government or agency is aware of, and has administrative responsibilities relating to, a proposed action that is to be taken by another person which has not otherwise been referred, please contact the Referrals Gateway (1800 803 772) to obtain an alternative contacts, signatures and declarations page.

<sup>2</sup> If your referred action, or a component of it, is to be taken in the Great Barrier Reef Marine Park the Minister is required to provide a copy of your referral to the Great Barrier Reef Marine Park Authority (GBRMPA) (see section 73A, EPBC Act). For information about how the GBRMPA may use your information, see [http://www.gbrmpa.gov.au/privacy/privacy\\_notice\\_for\\_permits](http://www.gbrmpa.gov.au/privacy/privacy_notice_for_permits).

proponent (if not the same person named at item 1 above):

**COMPLETE THIS SECTION ONLY IF YOU QUALIFY FOR EXEMPTION FROM THE FEE(S) THAT WOULD OTHERWISE BE PAYABLE**

- I qualify for exemption from fees under section 520(4C)(e)(v) of the EPBC Act because I am:
- ☐ an individual; OR
  - ☐ a small business entity (within the meaning given by section 328-110 (other than subsection 328-119(4)) of the *Income Tax Assessment Act 1997*); OR
  - ☐ not applicable.

If you are small business entity you must provide the Date/Income Year that you became a small business entity:

**Note: You must advise the Department within 10 business days if you cease to be a small business entity. Failure to notify the Secretary of this is an offence punishable on conviction by a fine (regulation 5.23B(3) *Environment Protection and Biodiversity Conservation Regulations 2000* (Cth)).**

**COMPLETE THIS SECTION ONLY IF YOU WOULD LIKE TO APPLY FOR A WAIVER**

- I would like to apply for a waiver of full or partial fees under Schedule 1, 5.21A of the [EPBC Regulations](#). Under sub regulation 5.21A(5), you must include information about the applicant (if not you) the grounds on which the waiver is sought and the reasons why it should be made:
- ☐ not applicable.
- Declaration

I declare that to the best of my knowledge the information I have given on, or attached to this form is complete, current and correct.  
I understand that giving false or misleading information is a serious offence.  
I agree to be the proponent for this action.  
I declare that I am not taking the action on behalf of or for the benefit of any other person or entity.

Signature



Date 29/3/16

---

**9.2 Person preparing the referral information (if different from 8.1)**

**Individual or organisation who has prepared the information contained in this referral form.**

Name Mr Heath Morgan  
Title Associate  
Organisation Strategen Environmental Consultants Pty Ltd trading as Strategen  
ACN / ABN (if applicable) 056 190 419

Postal address PO Box 287, Bunbury WA 6231

Telephone (08) 9792 4797

Email [h.morgan@strategen.com.au](mailto:h.morgan@strategen.com.au)

Declaration I declare that to the best of my knowledge the information I have given on, or attached to this form is complete, current and correct.  
I understand that giving false or misleading information is a serious offence.

Signature

A handwritten signature in black ink, appearing to be 'H. Morgan', written over a light grey circular background.

Date 29/3/16

# REFERRAL CHECKLIST

NOTE: This checklist is to help ensure that all the relevant referral information has been provided. It is not a part of the referral form and does not need to be sent to the Department.

## HAVE YOU:

- ☐ Completed all required sections of the referral form?
- ☐ Included accurate coordinates (to allow the location of the proposed action to be mapped)?
- ☐ Provided a map showing the location and approximate boundaries of the project area?
- ☐ Provided a map/plan showing the location of the action in relation to any matters of NES?
- ☐ Provided a digital file (preferably ArcGIS shapefile, refer to guidelines at [Attachment A](#)) delineating the boundaries of the referral area?
- ☐ Provided complete contact details and signed the form?
- ☐ Provided copies of any documents referenced in the referral form?
- ☐ Ensured that all attachments are less than three megabytes (3mb)?
- ☐ Sent the referral to the Department (electronic and hard copy preferred)?



## **Geographic Information System (GIS) data supply guidelines**

If the area is less than 5 hectares, provide the location as a point layer. If the area greater than 5 hectares, please provide as a polygon layer. If the proposed action is linear (eg. a road or pipeline) please provide a polyline layer.

GIS data needs to be provided to the Department in the following manner:

- Point, Line or Polygon data types: ESRI file geodatabase feature class (preferred) or as an ESRI shapefile (.shp) zipped and attached with appropriate title
- Raster data types: Raw satellite imagery should be supplied in the vendor specific format.
- Projection as GDA94 coordinate system.

Processed products should be provided as follows:

- For data, uncompressed or lossless compressed formats is required - GeoTIFF or Imagine IMG is the first preference, then JPEG2000 lossless and other simple binary+header formats (ERS, ENVI or BIL).
- For natural/false/pseudo colour RGB imagery:
  - If the imagery is already mosaiced and is ready for display then lossy compression is suitable (JPEG2000 lossy/ECW/MrSID). Prefer 10% compression, up to 20% is acceptable.
  - If the imagery requires any sort of processing prior to display (i.e. mosaicing/colour balancing/etc) then an uncompressed or lossless compressed format is required.

Metadata or 'information about data' will be produced for all spatial data and will be compliant with ANZLIC Metadata Profile. ([http://www.anzlic.org.au/policies\\_guidelines#guidelines](http://www.anzlic.org.au/policies_guidelines#guidelines)).

The Department's preferred method is using ANZMet Lite, however the Department's Service Provider may use any compliant system to generate metadata.

All data will be provide under a Creative Commons license (<http://creativecommons.org/licenses/by/3.0/au/>)