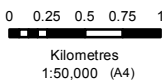


Aboriginal Heritage of the Project Area

Jandakot Airport Eastern Link Alignment

Figure 5

Coordinate System: GDA 1994 MGA Zone 50



LEGEND

— Options (ALL)

Aboriginal Heritage Sites

- R = Registered Site
- S = Stored Data
- I = Insufficient Information
- L = Lodged

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4.0 Factors of environmental significance

4.1 Threatened and Priority flora species

The Department of Environment and Conservation (DEC) assigns conservation codes to endemic plant species that are geographically restricted to few known populations or threatened by local processes. Allocating conservation codes to plant species assists in protecting populations and conserving species from potential threats (DEC, 2011a).

Under the *Wildlife Conservation Act 1950 (WC Act)*, the Minister for the Environment may declare species of flora to be protected if they are considered to be in danger of extinction, rare or otherwise in need of special protection. Schedule 1 and 2 deal with those species that are threatened and those that are presumed extinct, respectively (DEC, 2011b).

It is an offence to “take” or damage Rare Flora without Ministerial approval. Section 23F of the *WC Act* defines “to take” as “to gather, pick, cut, pull up, destroy, dig up, remove or injure the flora or to cause or permit the same to be done by any means”.

Species designated as Priority Flora are species that have not yet been adequately surveyed and are in urgent need of further survey (Priority 1 to 3), are rare but not threatened (Priority 4), or conservation dependent species (Priority 5). Appendix B presents the updated definitions of Conservation Codes for Western Australian Flora (DEC 2011b).

Species at risk of extinction are recognised at a Commonwealth level and are categorised according to the *EPBC Act* as summarised in Appendix B.

4.2 Threatened, Priority and Migratory fauna species

Species of fauna are defined as Threatened where their populations are under threat, require protection or are protected under an international agreement between federal governments. DEC recognises these threats of extinction and consequently applies regulations towards population and species protection.

Threatened fauna species are protected under Section 16 of the *WC Act*. Under the Act, it is an offence to “take, destroy or possess” threatened fauna without Ministerial approval. Conservation categories of fauna listed under Schedule 1 to 4 of the *WC Act* are summarised in Appendix C.

Threatened fauna (Schedule 1) are further ranked by DEC according to their threat using International Union for Conservation of Nature (IUCN) Red List criteria that are described as follows:

- CR Critically Endangered – considered to be facing an extremely high risk of extinction in the wild
- EN Endangered – considered to be facing a very high risk of extinction in the wild
- VU Vulnerable – considered to be facing a high risk of extinction in the wild.

Priority fauna not listed as Threatened (Scheduled) under the *WC Act*, but are poorly known or poorly represented in the conservation estate are regarded as Priority and attention is given to their conservation by DEC. The five classifications of Priority fauna are listed in Appendix C.

Threats of extinction of fauna species are also recognised at a Commonwealth level and are categorised according to the *EPBC Act*, administered by the Department of Sustainability, Environment, Water, Populations and Communities (SEWPaC). Categories of threatened species are summarised in Appendix C.

Migratory species are matters of Commonwealth environmental significance under the *EPBC Act*. Migratory species are defined as animals that migrate to Australia and its external territories, or pass through or over Australian waters during their annual migrations (SEWPaC, 2012a). Recognised migratory species include any native species identified in an international agreement approved by the Minister and those listed under:

- Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention)
- China-Australia Migratory Bird Agreement (CAMBA)
- Japan-Australia Migratory Bird Agreement (JAMBA).

4.3 Threatened and Priority Ecological Communities

Threatened Ecological Communities (TECs) are naturally occurring biological assemblages that occur in a particular type of habitat and that are subject to processes that threaten to destroy or significantly modify the assemblage across its range (DEC, 2001).

Vegetation communities in Western Australia are described as TECs if they have been endorsed by the Western Australian Minister for Environment following recommendations made by the TEC Scientific Committee. There are currently four categories for TECs; Presumed Totally Destroyed (PD), Critically Endangered (CR), Endangered (EN) or Vulnerable (VU). TECs on the Commonwealth register are also listed by the SEWPaC. Definitions of Commonwealth and State TEC categories and criteria are provided in Appendix D.

There is currently no legislation to directly protect TECs that are only listed to be of State conservation significance in Western Australia except, those that are also listed by SEWPaC are protected under the Commonwealth *EPBC Act*. The remainder have limited protection under the *WC Act* and the *EP Act*. For those, the EPA's position on TECs is that proposals resulting in the direct loss of TECs are likely to be formally assessed during the assessment of clearing permit applications whereby the impact on significant communities is a key consideration.

Potential TECs that do not currently meet criteria or that are not adequately defined, are rare but not threatened, have been recently removed from the TEC list or require regular monitoring are regarded as Priority Ecological Communities (PEC) (DEC, 2010a). DEC requires that they are considered during environmental impact assessments.

4.4 Communities of local, regional and national significance

Vegetation communities can be referred to as locally, regionally or nationally significant based on a number of qualifying criteria as described in Appendix D. EPA Guidance Statement 51 (EPA, 2004) also states that 'vegetation may be significant for a range of reasons, other than a statutory listing as a TEC or because the extent is below threshold level'. Additionally, (EPA, 2004) states that 'species, subspecies, varieties, hybrids and ecotypes may also be significant for a range of reasons other than as Threatened Flora (T or X) or Priority Flora' and this is further described in Appendix D.

4.5 Vegetation clearing, extent and status

The current extent of vegetation types that remain is important in considering the significance of proposed clearing. That is, vegetation that is poorly represented is of greater significance and proposed impacts to such vegetation types is considered to be of greater significance in terms of impact assessment.

Where clearing of native vegetation is proposed to occur, from a biodiversity perspective and not taking into account any other land degradation issues present, there are now several key criteria being applied to clearing permits. The criteria, as outlined in the Western Australia EPA Position Statement No. 2, Environmental Protection of Native Vegetation in Western Australia: Clearing of native vegetation, with particular reference to the agricultural area (EPA, 2000). This position statement is used to help reverse the long-term decline in the quality and extent of Australia's native vegetation cover and applies to all areas of native remnant vegetation in the state, with particular reference to the agricultural area. The criteria are as follows:

- the "threshold level" below which species loss appears to accelerate exponentially at an ecosystem level is regarded as being at a level of 30% of the pre-clearing extent of the vegetation type
- a level of 10% of the original extent is regarded as being a level representing "endangered"
- clearing which would result in exceeding the "threshold level" should be avoided
- from a biodiversity perspective, stream reserves should generally be in the order of at least 200m wide.

The status of remaining vegetation can be delineated into five different classes:

- Presumed Extinct: Probably no longer present in the bioregion
- Endangered: <10% of pre-European extent remains
- Vulnerable: 10-30% of pre-European extent exists
- Depleted: >30% and up to 50% of pre-European extent exists
- least concern: >50% pre-European extent exists and subject to little or no degradation over a majority of this area or
- a combination of depletion, loss of quality, current threats and rarity gives a comparable status.

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5.0 Methodology

5.1 Environmental constraints assessment

The Environmental Review involved assessment of the environmental constraints and opportunities of the Project Area. This enabled an understanding of the existing environmental conditions and identification of any potential environmental impacts and issues posed by the project. These included assessment of:

- potential Threatened flora habitat
- potential Threatened fauna habitat
- key ecological linkages
- extent of weeds
- potential dieback

The Environmental Review consisted of a desktop assessment and a field assessment.

5.1.1 Desktop assessment

A search of DEC's databases and *EPBC Act* Protected Matters online database was conducted in March 2013 prior to the field assessment to identify flora species and vegetation communities of conservation significance that may have the potential to occur within the Project Area.

The search co-ordinates used were latitude 32° 5' 12" and longitude 115° 53' 10" with a 5 km buffer applied. The following databases were interrogated:

- DEC Threatened Flora Database
- DEC Threatened and Priority Fauna Database
- Western Australian Herbarium records
- DEC Threatened and Priority Flora List
- DEC Threatened Ecological Community (TEC) and Priority Ecological Community (PEC) database
- DEC Naturemap
- *EPBC Act* Protected Matters database
- Birds Australia Birdata.

5.1.2 Field assessment

The field assessment was conducted by Senior Botanist Catherine Krens and Graduate Ecologist Matthew Cann of AECOM on 18 March 2013.

General notes, observations, GPS locations and photographs of potential constraints and opportunities were taken during the field assessment.

5.1.3 Habitat assessment for significant flora species

Habitat suitable for significant flora species was identified and mapped, particularly Threatened orchid species (*Caladenia huegelii* and *Drakaea elastica*) known to occur within the Project Area. The following information was recorded to enable identification of suitable habitat:

- soil description
- landform description
- condition and disturbance present
- dominant and associated species

Although the field assessment was conducted out of season for the orchid species, the information recorded would assist in determining potential locations and providing recommendations for a targeted survey for the chosen alignment.

5.1.4 Habitat assessment for significant fauna species

Observations were made within the Project Area for key fauna habitats, including areas of potential significant trees and general observations including any species recorded. Where fauna species or habitats of significance were observed, site details using a GPS and the key aspects were recorded. All observations were made between the daylight hours of 0700 and 1730 hours.

Trees of suitable species (Jarrah, Marri, Tuart) which have a diameter at breast height of greater than 500mm are considered to potentially provide hollows within the next 5 to 100 years. Such trees are considered 'significant trees' with regards to Black-cockatoo habitat. Trees of suitable height and in close proximity to water bodies and food sources can be considered suitable roosting sites for Black-cockatoos. Suitable foraging habitat for Black-cockatoos on the Swan Coastal Plain includes areas that support *Banksia*, Marri (*Corymbia calophylla*), Jarrah (*Eucalyptus marginata*), *Allocasuarina* and Proteaceous species (*Hakea*, *Grevillea*) and introduced/plantation species including Pines and Cape Lilac.

5.1.5 Key ecological linkage values

Areas of remnant vegetation where the alignment would present a severance or fragmentation were identified and mapped with particular focus on fauna species movements, such as small mammals and reptiles.

5.1.6 Condition

General observations of weeds were undertaken including the presence of any Declared Plants if observed, as well as locations of major weed infestations, and their impact on the native vegetation such as edge effect.

5.1.7 Dieback assessment

Visual observations of areas of potential dieback infestation were recorded. Susceptible species such as Grasstrees (*Xanthorrhoea* species), *Eucalyptus* species, Proteaceous species and *Allocasuarina* species were particularly inspected for signs of stress that may be the result of dieback infestation. Locations of observed vegetation stress were recorded and recommendations for possible further detailed assessment by accredited dieback assessors via plant tissue and soil inoculations were made.

5.2 Survey limitations

A number of limitations relating to the ecological assessment of the Project Area have been considered and these are described below.

- In particular orchid species were unable to be identified as actually occurring within the Project Area as they had not physically broken the soil surface. Identification of potential habitat will indicate where they may occur. Confirmation of their presence would be required by a targeted survey.
- The alignment options surveyed will require resurveying once confirmed, as additional environmental constraints not surveyed may be present.

6.0 Results

6.1 Flora and vegetation

6.1.1 Desktop assessment

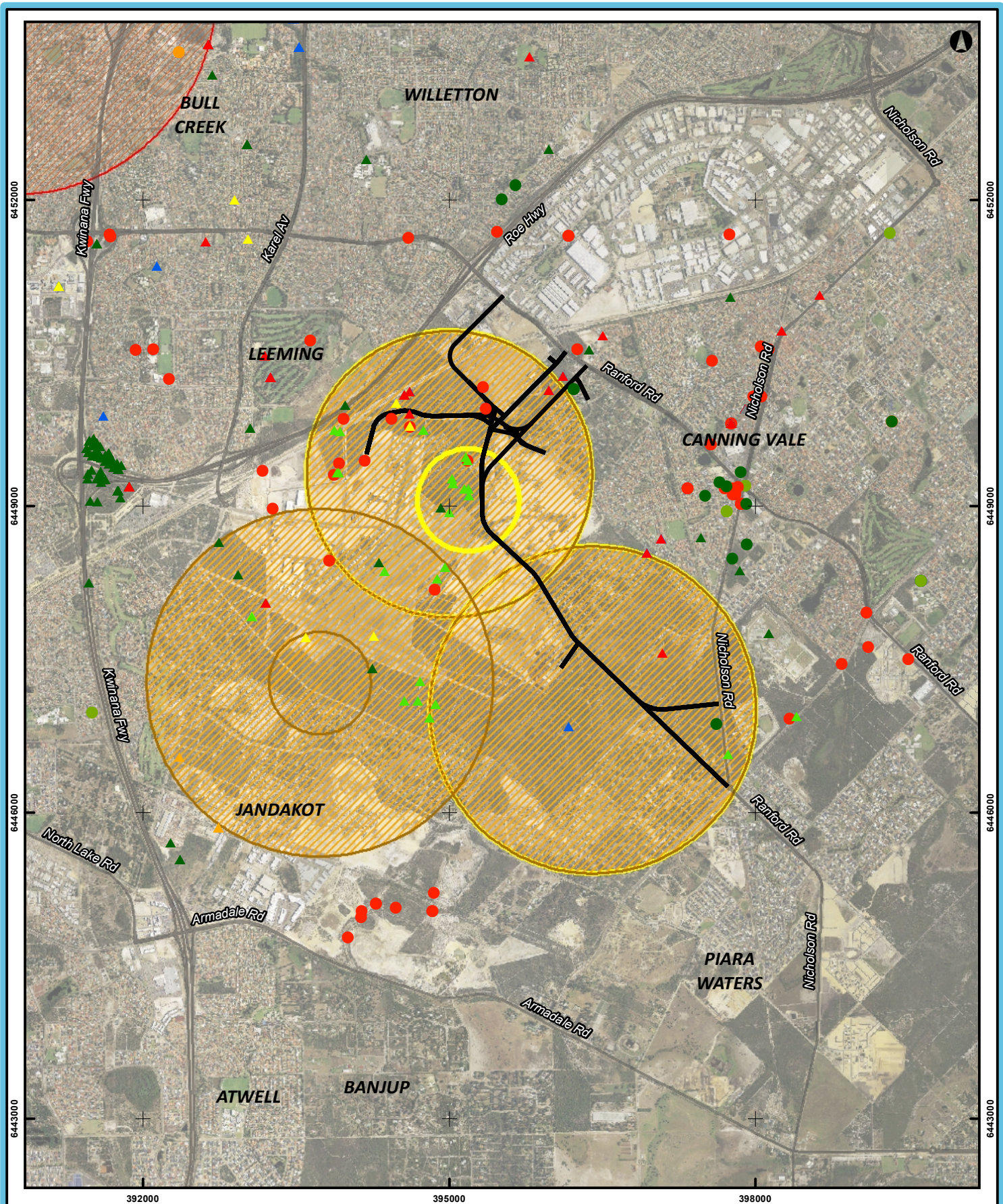
A total of 26 Threatened and Priority flora species were identified from the database search as potentially occurring within the Project Area. Of these species:

- 13 are listed as Threatened (*WC Act*)
- Two are listed as Critically Endangered (*EPBC Act*)
- Nine are listed as Endangered (*EPBC Act*)
- Two are listed as Vulnerable (*EPBC Act*)
- 11 are listed as Priority Flora

Results from the *EPBC Act* Protected Matters database are included in Appendix E and results from the DEC flora database are presented spatially in Figure 6.

Two Threatened Ecological Communities (TECs) were identified as occurring within 5 km of the Project Area. Both TECs are listed as Endangered under the *WC Act* and *EPBC Act*. No previously recorded occurrences of Priority Ecological Communities within 5 km of the Project Area were identified from the databases search.

Recorded locations by DEC of Threatened and Priority flora, fauna and Ecological Communities is presented in Figure 6.

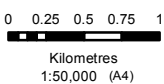


Known Populations of Threatened Flora and Fauna within the Project

Jandakot Airport Eastern Link Alignment

Figure 6

Coordinate System: GDA 1994 MGA Zone 50



LEGEND

- Options (ALL)
- DEC Threatened/Priority Communities**
- P2 - Wooded wetlands which support colonial waterbird nesting areas
- P3 - Banksia ilicifolia woodlands
- P3 - Low lying Banksia attenuata woodlands or shrublands

DEC Threatened Flora (WAHerb & TPFL)

- T
- P1
- P2
- P3
- P4

Threatened Fauna

- IA
- S
- T
- 1
- 3
- 4
- 5

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6.1.2 Potential Threatened Flora habitat

Two Threatened orchid species, *Caladenia huegelii* and *Drakaea elastica* have previously been recorded throughout Ken Hurst Park and Jandakot Airport Bushland. These species occur within *Banksia* woodland (*B. attenuata*, *B. menziesii* and *B. grandis*) habitat, which occurs extensively throughout the Project Area (Plate 1), particularly along Leeming Road adjacent to Ken Hurst Park to the north and Jandakot Airport Bushland to the south. Locations of potential Threatened Flora habitat are identified in Table 7 and the constraints map in Appendix F.



Plate 1 *Banksia* woodland habitat

Table 7 Threatened Flora habitat within the Project Area

Habitat	Threatened species	Alignment options	Location
<i>Banksia</i> woodlands	<i>Caladenia huegelii</i> and <i>Drakaea elastica</i>	Common link	Leeming Road skirting Ken Hurst Park to the north and Jandakot Airport Bushland to the south
<i>Banksia</i> woodlands	<i>Caladenia huegelii</i> and <i>Drakaea elastica</i>	1	Within Jandakot Airport Bushland, at corner of Lothian Road and Clifton Road
<i>Banksia</i> woodlands	<i>Caladenia huegelii</i> and <i>Drakaea elastica</i>	2	Small section of Jandakot Airport Bushland along Johnston Road near the intersection of Clifton Road
<i>Banksia</i> woodlands	<i>Caladenia huegelii</i> and <i>Drakaea elastica</i>	3a	Clifton Road skirting Ken Hurst Park

6.1.3 Potential Threatened fauna habitat

Habitat for Threatened Fauna species was observed to occur within the Project Area, this includes *Banksia* woodlands suitable for Black-cockatoo species (Carnaby, Baudin's and Forest Red-Tail). These species are listed as 'fauna that is rare or likely to become extinct' or Schedule 1 under the *WC Act* and listed as Endangered under the *EPBC Act*. *Banksia* woodlands occurs extensively throughout the Project Area (Section 6.1.2), and would provide potential foraging habitat for all three Black-cockatoo species, with their diet favouring *Proteaceous* (*Banksia*) species (Plate 2).



Plate 2 Potential Black-cockatoo habitat

Habitat was identified to potentially support Quenda, which is listed as a Priority 5 species (*WC Act*). This classification is given to fauna that is considered by the DEC as not threatened but is under a specific conservation program. Quenda are found in woodland, heath and shrub communities on the Swan Coastal Plain and prefers a combination of sandy soils and dense heathy vegetation (Van Dyck & Strahan, 2008). Quenda prefer moister soils associated with wetlands and dense scrubby, often swampy, vegetation with dense cover up to one metre high. This habitat occurs within Ken Hurst Park and Jandakot Airport Bushland adjacent to all three alignment options and the common link (Plate 3).



Plate 3 Potential Quenda habitat

Table 8 lists where suitable Black-cockatoo and Quenda habitat occurs within the Project Area. Locations of potential Threatened Fauna habitat are identified in the constraints map in Appendix F.

Table 8 Threatened Fauna habitat within the Project Area

Alignment options	Habitat	Threatened species	Location
Common link	<i>Banksia</i> woodlands	Black-cockatoo (Carnaby, Baudin's, Forest Red-Tailed) and Quenda	Leeming Road skirting Ken Hurst Park to the north and Jandakot Airport Bushland to the south
1	<i>Banksia</i> woodlands	Black-cockatoo (Carnaby, Baudin's, Forest Red-Tailed) and Quenda	Within Jandakot Airport Bushland, at corner of Lothian Road and Clifton Road
1	<i>Myrtaceae</i> spp. heath over sedgeland	Quenda	Skirting Lothian Road within Jandakot Airport Bushland
2	<i>Banksia</i> woodlands	Black-cockatoo (Carnaby, Baudin's, Forest Red-Tailed) and Quenda	Small section of Jandakot Airport Bushland along Johnston Road near the intersection of Clifton Road
2	<i>Myrtaceae</i> spp. heath over sedgeland	Quenda	Skirting Jandakot Airport Bushland along Johnston Road
3a	<i>Banksia</i> woodlands	Black-cockatoo (Carnaby, Baudin's, Forest Red-Tailed) and Quenda	Clifton Road skirting Ken Hurst Park

6.1.4 Ecological linkages

Important ecological linkages are present between remnant vegetation areas, including Bush Forever sites, within the Project Area. Ecological linkages are important in preserving the biodiversity within remnant vegetation which are commonly fragmented particularly throughout the Swan Coastal Plain. They have been identified as a useful and imperative way to restore the connectivity of fragmented landscapes. There is a vast literature on corridors and diverse reasons for creating or retaining corridors (Davis, 2011). One author, Andrews (1993), describes the primary objectives of a corridor as being to:

- 1) Permit colonisation of new sites as they become suitable
- 2) Allow wildlife to move out of sites as they become unsuitable
- 3) Permit re-colonisation of extinct populations
- 4) Allow species to move between different areas as required in their life cycle
- 5) Increase the overall extent of habitat within an area.

Roads, tracks and gaps can be barriers to mobility and have negative impacts on populations that increase with increasing barrier width, traffic noise and traffic volume. These impacts should be avoided or mitigated. The best strategies for birds would be to ensure revegetation up to the road and to soften the barrier effect of roads (Davis, 2011).

Impacts from the Project Area on ecological linkages including potential fragmentation, degradation, barrier widening and severance of ecological linkages are summarised in Table 9. Locations of potential loss of ecological linkages are identified in the constraints map in Appendix F.

Fauna underpasses may enable movement of fauna to continue within bushland areas. Fauna underpasses usually take the form of a culvert, but sometimes an underpass may be under a bridge structure. Culverts are the most suitable for fauna passage and allow the free movement for a wide range of native species. Culverts suitable for terrestrial fauna should provide dry passage conditions for the majority of the time. Culverts may be either singular or multiple, round or box sections and of various radii or rectangular box dimensions (Main Roads WA, 2010).

Table 9 Impacts on ecological linkages within the Project Area

Alignment options	Location	Impact
Common link	Intersecting Jandakot Airport Bushland where the alignment turns south from Leeming Road into the airport	May potentially sever ecological linkage within Jandakot Airport Bushland reducing the movement of fauna (particularly reptiles) through this section of bushland.
1	Intersecting Jandakot Airport Bushland where Lothian Road turns north-west onto Clifton Road	May potentially fragment bushland which is currently in very good condition, resulting in degradation, increased weeds and potential impacts on Threatened orchid (<i>Caladenia huegellii</i> and <i>Drakaea elastica</i>) populations present.
2	Intersecting Jandakot Airport Bushland at the corner of Leeming and Johnston Roads	Currently this area consists of a narrow sand track which provides some ecological linkage between Jandakot Airport Bushland and Ken Hurst Park. Removal of this section of bushland would widen the area of disturbance, promoting weeds and potentially severing this ecological linkage.
3a	Intersecting Ken Hurst Park at the corner of Clifton and Leeming Roads and Intersecting Jandakot Airport Bushland adjacent to Clifton Road	Will involve removing bushland within Ken Hurst Park as well as a large section of Jandakot Airport Bushland, potentially severing the ecological linkage between Ken Hurst Park and Jandakot Airport Bushland as well as fragmenting and encroaching on the bushland.

6.1.5 Condition

Weeds were mainly common in disturbed areas along the edges of tracks and road reserves, however further into the bushland (>15 metres) weed cover diminished considerably. This is typical of urban areas, with multiple pathways for weed entry, including bare and disturbed areas, edge effects, tracks and high traffic locations (plate 4).

No Declared Plants listed under the *Agriculture and Related Resources Protection Act, 1976* were observed during the field assessment.

Along Johnston Road near the intersection of Ranford Road (Alignment 2), it appears that a mixture of native and non-native trees and large shrub species have been planted along the road verge.

Grassy weeds were dominant along Leeming Road which is currently used as a fire break between Ken Hurst Park and Jandakot Airport Bushland (plate 5). Weeds were particularly prevalent at the intersection of Leeming, Johnston and Clifton Roads where disturbance and clearing is present, this area may be providing an entry point for weeds into Ken Hurst Park and Jandakot Airport Bushland (plate 6).



Plate 4 Edge effect of weeds on bushland



Plate 5 Weeds along fire break



Plate 6 Disturbed area at intersection of Leeming, Clifton and Johnston Roads

6.1.6 Potential dieback

Potential dieback was observed within the Project Area, where individual trees of *Banksia* species were observed to have died. These locations were in *Banksia* woodlands and areas of moister soils within Jandakot Airport Bushland adjacent Lothian Road (Alignment 1). This occurs mainly in the eastern sections of Jandakot Airport Bushland and Ken Hurst Park adjacent to the common link along Leeming Road (plate 7) and adjacent to the proposed common link roundabout at the intersection of Leeming, Clifton and Johnston Roads. Potential locations of dieback are identified in Table 10.

Table 10 Potential dieback locations

Alignment options	Location	Species affected	Number of plants affected
Common link	Along Leeming Road within <i>Banksia</i> woodlands near Mustang Road (plate 7)	<i>Banksia</i> spp.	6
1	Along Lothian Road	Unknown <i>Myrtaceae</i> spp. (tree)	1
1, 2, 3a	Intersection of Leeming, Clifton and Johnston Roads	<i>Banksia</i> and <i>Melaleuca</i> species	>20



Plate 7 **Potential dieback infestation**

7.0 Discussion

The alignment options raise a number of environmental constraints and opportunities. Taking into account only the environmental issues, it appears that Alignment 2 has the least number of environmental constraints. It also provides a number of offset opportunities in the form of revegetation.

7.1 Common link – roundabout to Jandakot Airport

This section would link to the chosen alignment at the proposed Johnston, Clifton and Leeming Roads roundabout intersection, and then travel along Leeming Road adjacent to Ken Hurst Park to the north and Jandakot Airport Bushland to the south. It would then turn south to intersect Jandakot Airport Bushland before Marriot Road and enter into the airport.

The environmental constraints of the common link are outlined in Table 10, which include:

- potential presence of Threatened orchid species (*Caladenia huegelii* and *Drakaea elastica*)
- potential presence of Black-cockatoo foraging habitat and Quenda habitat
- will require clearing of Jandakot Airport Bushland
- potential severance of ecological linkage within Jandakot Airport Bushland
- intersects resource enhancement wetland (UFI 13332)
- potential dieback infestation present
- adjacent to contaminated site (Jandakot Airport – reg. number 2228/469).

7.2 Alignment 1 option – Lothian Road

This alignment would involve extending the existing road reserve into Jandakot Airport Bushland for the length of Lothian Road, turning north-west into Clifton Road further cutting into Jandakot Airport Bushland. This alignment presents a number of environmental constraints, which are outlined in Table 11. The main environmental constraints are:

- potential presence of Threatened orchid species (*Caladenia huegelii* and *Drakaea elastica*)
- potential presence of Black-cockatoo foraging habitat and Quenda habitat
- will require extensive clearing of Bush Forever site 388 (Jandakot Airport Bushland)
- potential severance of ecological linkage within Jandakot Airport Bushland
- intersects resource enhancement wetland (UFI 13332) and adjacent to conservation category wetland (UFI 6912)
- potential presence of dieback infestations.

Opportunities for this alignment include mitigating noise impacts on residents along Lothian Road from additional traffic this alignment would attract.

7.3 Alignment 2 option – Johnston Road

This alignment would require clearing sections of Jandakot Airport Bushland, a Bush Forever site. It would potentially provide access to the proposed bus station and planned industrial area to the west of Johnston Road. The road meanders partly through Jandakot Airport Bushland and cleared areas, unlike Alignment 1, clearing of bushland would not occur along the full length of Johnston Road. The environmental constraints have been outlined in Table 11, which include:

- potential presence of Threatened orchid species (*Caladenia huegelii* and *Drakaea elastica*)
- potential presence of Black-cockatoo foraging habitat and Quenda habitat
- partly within Bush Forever site 388 (Jandakot Airport Bushland)
- potentially may sever ecological linkage within Jandakot Airport Bushland
- intersects conservation category wetland (UFI 6911) and adjacent to resource enhancement wetland (UFI 13332).

There are a number of potential offset opportunities associated with this alignment option, which could be applied in return for construction of this alignment. The section of Jandakot Airport Bushland in which this alignment is located is degraded with a number of bare and weedy areas which could be rehabilitated through weed control and revegetation. The Bush Forever site could be protected through fencing, with the alignment acting as a boundary between the bushland and industrial area. This would aid management of the bushland by ensuring no further removal of bushland would be required and rehabilitation work could commence.

Another offset opportunity could be the rehabilitation of the adjacent landfill site to the west of the alignment, which is currently cleared of native vegetation, contains a high percentage of weed cover and currently is a point source for weeds into adjacent bushland (Ken Hurst Park and Jandakot Airport Bushland). Opportunities to suitably rehabilitate this area or to create a passive recreation open space could be explored.

7.4 Alignment 3a option – Bannister Road extension




This alignment would intersect Ken Hurst Park and Jandakot Airport Bushland at the southern end of the alignment near the common link roundabout. Further impacts may also occur where the alignment skirts the north-eastern boundary of Ken Hurst Park. The environmental constraints have been outlined in Table 11, which are summarised as:

- potential presence of Threatened orchid species (*Caladenia huegelii* and *Drakaea elastica*)
- potential presence of Black-cockatoo foraging habitat and Quenda habitat
- impacts on Bush Forever sites (Ken Hurst Park and Jandakot Airport Bushland)
- may cause fragmentation within Ken Hurst Park and Jandakot Airport Bushland
- partly within a resource enhancement wetland
- potential dieback infestation present
- adjacent to contaminated site (reg number 2228/469).

Table 11 Environmental constraints matrix

Environmental constraints	Common link to JIA From roundabout to Jandakot Airport	Alignment 1 Lothain Road	Alignment 2 Johnston Road	Alignment 3a Bannister Road extension
Potential Threatened Flora Habitat	Intersects sections of Jandakot Airport Bushland and potentially Ken Hurst Park where populations of Threatened orchids <i>Caladenia huegelii</i> and <i>Drakaea elastica</i> have previously been recorded Potential major impact	South-western section of the alignment which intersects Jandakot Airport Bushland may potentially contain populations of Threatened orchids <i>Caladenia huegelii</i> and <i>Drakaea elastica</i> Potential moderate impact	Sections of Jandakot Airport Bushland which this alignment intersects may potentially contain populations of Threatened orchids <i>Caladenia huegelii</i> and <i>Drakaea elastica</i> Potential moderate impact	Intersects Ken Hurst Park and Jandakot Airport Bushland where populations of Threatened orchids <i>Caladenia huegelii</i> and <i>Drakaea elastica</i> have previously been recorded Potential major impact
Potential Threatened Fauna Habitat	Intersects suitable Black-cockatoo foraging habitat and Quenda habitat within Jandakot Airport Bushland and potentially Ken Hurst Park Potential major impact	South-western section of this alignment intersects potential Black-cockatoo foraging habitat and the entire alignment intersects Quenda habitat Potential moderate impact	Sections of alignment intersecting Jandakot Airport Bushland may potentially be suitable Quenda habitat and the southern section of the alignment may intersect potential Black-cockatoo foraging habitat Potential moderate impact	Intersects Ken Hurst Park and Jandakot Airport Bushland which is suitable Black-cockatoo foraging habitat and Quenda habitat Potential major impact
Wetlands	Intersects a resource enhancement wetland (UFI 6777) Potential moderate impact	Adjacent to a conservation category wetland (UFI 6912) and intersects a resource enhancement wetland (UFI 13332) Potential moderate impact	Intersects a conservation category wetland (6911) and a resource enhancement wetland (UFI 13332) Potential major impact	Intersects a resource enhancement wetland (UFI 6776) Potential moderate impact
Ecological linkage values	Intersects a large section of Jandakot Airport Bushland potentially splitting the bushland and severing ecological linkages Potential major impact	South-western section of this alignment intersects a section of Jandakot Airport Bushland in very good condition, potentially fragmenting and reduced ecological linkages Potential major impact	Southern section of this alignment required removal of a section of Jandakot Airport Bushland, potentially widening the barrier and ecological linkage between Ken Hurst Park and Jandakot Airport Bushland Potential moderate impact	Intersects Ken Hurst Park and Jandakot Airport Bushland, potentially fragmenting the bushland and reducing the ecological linkage between the two bushlands Potential major impact

Environmental constraints	Common link to JIA From roundabout to Jandakot Airport	Alignment 1 Lothain Road	Alignment 2 Johnston Road	Alignment 3a Bannister Road extension
Bush Forever	Intersects Jandakot Airport Bushland from Leeming Road to Jandakot Airport. This section of bushland is in very good condition and potential foraging habitat for Black-cockatoo and Quenda habitat. There is a high probability that Threatened orchid species (<i>Drakea elastica</i> and <i>Caladenia huegelii</i>) may be present Potential major impact	Located within Jandakot Airport Bushland, this alignment will require extensive clearing along the length of Lothian Road to widen the road reserve (approximately 45 metres). Further clearing is required through to create the new intersection between Lothian and Clifton Roads. Sections of bushlands within which the alignment is located is in the best condition compared to the rest of the bushland Potential major impact	Located partly within Jandakot Airport Bushland and cleared areas therefore it will not impact as much on Jandakot Airport Bushland as Alignment 1. Also the condition of this section of bushland is in poor condition where weeds are dominant Potential moderate impact	Intersects Ken Hurst Park and Jandakot Airport Bushland Potential major impact
Dieback	Potential dieback infestation adjacent to the roundabout Potential moderate impact	Several sections of the alignment contain potential dieback infestation Potential moderate impact	N/A No potential impact	Potential dieback at intersection of Johnston, Leeming and Clifton Roads Potential major impact
Contaminated sites	Adjacent to contaminated site Jandakot Airport (reg. number 2228/469) which is classified as contaminated – remediation required Potential minor impact	N/A No potential impact	N/A No potential impact	N/A No potential impact

	Minor or no impact
	Moderate impact
	Major impact

8.0 References

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Appendix A

Definitions of Wetland Geomorphic Classifications and Management Categories

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Appendix A

Wetland definitions and categories

Table 1 Wetland types according to the geomorphic classification systems (Semeniuk & Semeniuk, 1995)

Water longevity	Landform				
	Basin	Channel	Flat	Slope	Highland
Permanent inundation	Lake	River	-	-	-
Seasonal inundation	Sumpland	Creek	Floodplain	-	-
Intermittent inundation	Playa	Wadi	Barlkarra	-	-
Seasonal waterlogging	Dampland	Trough	Palusplain	Paluslope	Palusmont

Table 2 Wetland management categories (EPA, 2008)

Management category	General description	Management objectives
Conservation (incorporates EPA Bulletin 686 categories H and C)	Wetlands which support a high level of attributes and functions	<p>Highest priority wetlands. Objective is to preserve and protect the existing conservation values of the wetlands through various mechanisms including:</p> <ul style="list-style-type: none"> • reservation in national parks, crown reserves and State owned land, • protection under Environmental Protection Policies, and • wetland covenanting by landowners. <p>No development or clearing is considered appropriate. These are the most valuable wetlands and any activity that may lead to further loss or degradation is inappropriate.</p>
Resource enhancement (incorporates EPA Bulletin 686 categories O and R)	Wetlands which may have been partially modified but still support substantial ecological attributes and functions	<p>Priority wetlands. Ultimate objective is to manage, restore and protect towards improving their conservation value. These wetlands have the potential to be restored to Conservation category. This can be achieved by restoring wetland function, structure and biodiversity.</p> <p>Protection is recommended through a number of mechanisms.</p>
Multiple use (aligns with EPA Bulletin 686 category M)	Wetlands with few remaining important attributes and functions	Use, development and management should be considered in the context of ecologically sustainable development and best management practice catchment planning through landcare.

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Appendix B

Definitions of Threatened and Priority Flora Species

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Appendix B

Definitions of Western Australian (state) conservation significant flora species (DEC, 2011)

Conservation Code	Category
X	<p>Presumed Extinct Flora (Declared Rare Flora - Extinct) Taxa which have been adequately searched for and there is no reasonable doubt that the last individual has died, and have been gazetted as such Schedule 2 under the Wildlife Conservation Act 1950).</p>
T	<p>Threatened Flora – (Declared Rare Flora – Extant) Taxa which have been adequately searched for and are deemed to be in the wild either rare, in danger of extinction, or otherwise in need of special protection and have been gazetted as such (Schedule 1 under the Wildlife Conservation Act 1950).</p>
P1	<p>Priority One – Poorly Known Species Species that are known from one or a few collections or sight records (generally less than five), all on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, Shire, Westrail and Main Roads WA road, gravel and soil reserves, and active mineral leases and under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes.</p>
P2	<p>Priority Two – Poorly Known Species Species that are known from one or a few collections or sight records, some of which are on lands not under imminent threat of habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, vacant Crown land, water reserves, etc. Species may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes.</p>
P3	<p>Priority Three – Poorly Known Species Species that are known from collections or sight records from several localities not under imminent threat, or from few but widespread localities with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several localities but do not meet adequacy of survey requirements and known threatening processes exist that could affect them.</p>
P4	<p>Priority Four – Rare, Near Threatened and other species in need of monitoring (a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection, but could be if present circumstances change. These species are usually represented on conservation lands. (b) Near Threatened. Species that are considered to have been adequately surveyed and that do not qualify for Conservation Dependent, but that are close to qualifying for Vulnerable. (c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.</p>
P5	<p>Priority Five: Conservation Dependent species Species that are not threatened but are subject to a specific conservation program, the cessation of which would result in the species becoming threatened within five years.</p>

Definitions of Commonwealth threatened flora species (Environmental Protection and Biodiversity Conservation Act, 1999)

Conservation Code	Category
Ex	<p>Extinct Taxa which at a particular time if, at that time, there is no reasonable doubt that the last member of the species has died.</p>
ExW	<p>Extinct in the Wild Taxa which is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; or it has not been recorded in its known and/or expected habitat, at appropriate seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form.</p>
CE	<p>Critically Endangered Taxa which at a particular time if, at that time, it is facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria.</p>
E	<p>Endangered Taxa which is not critically endangered and it is facing a very high risk of extinction in the wild in the immediate or near future, as determined in accordance with the prescribed criteria.</p>
V	<p>Vulnerable Taxa which is not critically endangered or endangered and is facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria.</p>
CD	<p>Conservation Dependent Taxa which at a particular time if, at that time, the species is the focus of a specific conservation programme, the cessation of which would result in the species becoming vulnerable, endangered or critically endangered within a period of 5 years.</p>

Appendix C

Definition of Threatened and Priority Fauna Species

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Appendix C -Definition of Threatened and Priority Fauna Categories

Table 1 Categories of threatened Fauna under the *Wildlife Conservation Act 1950* [WA]

Conservation Code	Category
Schedule 1	Fauna that is rare or likely to become extinct, are declared to be fauna that is in need of special protection.
Schedule 2	Fauna that is presumed to be extinct, are declared to be fauna that is in need of special protection.
Schedule 3	Birds that are subject to an agreement between the governments of Australia and Japan relating to the protection of migratory birds and birds in danger of extinction are declared to be fauna that is in need of special protection.
Schedule 4	Fauna that is in need of special protection, otherwise than for the reasons mentioned (in Schedule 1-3).

Table 2 Categories of specially protected fauna species as prioritised by DEC

Conservation Code	Category
P1	Taxa with few, poorly known populations on threatened lands. Taxa which are known from few specimens or sight records from one or a few localities on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, active mineral leases. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
P2	Taxa with few, poorly known populations on conservation lands. Taxa which are known from few specimens or sight records from one or a few localities on lands not under immediate threat of habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, vacant Crown land, water reserves, etc. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
P3	Taxa with several, poorly known populations, some on conservation lands. Taxa which are known from few specimens or sight records from several localities, some of which are on lands not under immediate threat of habitat destruction or degradation. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
P4	Taxa in need of monitoring. Taxa which are considered to have been adequately surveyed, or for which sufficient knowledge is available, and which are considered not currently threatened or in need of special protection, but could be if present circumstances change. These taxa are usually represented on conservation lands.
P5	Taxa in need of monitoring. Taxa which are not considered threatened but are subject to a specific conservation program, the cessation of which would result in the species becoming threatened within five years.

Table 3 Categories of Fauna Species Listed under Schedule 179 of the *Environment, Protection and Biodiversity Conservation Act 1999* [Commonwealth]

Conservation	Code Category
Ex	Extinct Taxa not definitely located in the wild during the past 50 years
ExW	Extinct in the Wild Taxa known to survive only in captivity
CE	Critically Endangered Taxa facing an extremely high risk of extinction in the wild in the immediate future
E	Endangered Taxa facing a very high risk of extinction in the wild in the near future
V	Vulnerable Taxa facing a high risk of extinction in the wild in the medium-term
CD	Conservation Dependent Taxa suspected of being Rare, Vulnerable or Endangered, but whose true status cannot be determined without more information

Appendix D

Definitions of Threatened and Priority Ecological Communities

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Appendix D

Definitions of State (Western Australia) Threatened and Priority Ecological Communities

Table 1 State TEC categories and definitions

Category	Definition
Endangered (EN)	<p>An ecological community that has been adequately searched for but for which no representative occurrences have been located. The community has been found to be totally destroyed or so extensively modified throughout its range that no occurrence of it is likely to recover its species composition and/or structure in the foreseeable future.</p> <p>An ecological community will be listed as presumed totally destroyed if there are no recent records of the community being extant and either of the following applies (a or b):</p> <ul style="list-style-type: none"> a) records within the last 50 years have not been confirmed despite thorough searches of known or likely habitats or b) all occurrences recorded within the last 50 years have since been destroyed
Critically Endangered (CR)	<p>An ecological community that has been adequately surveyed and found to have been subject to a major contraction in area and/or that was originally of limited distribution and is facing severe modification or destruction throughout its range in the immediate future, or is already severely degraded throughout its range but capable of being substantially restored or rehabilitated.</p> <p>An ecological community will be listed as Critically Endangered when it has been adequately surveyed and is found to be facing an extremely high risk of total destruction in the immediate future. This will be determined on the basis of the best available information, by it meeting any one or more of the following criteria (a, b or c):</p> <ul style="list-style-type: none"> a) The estimated geographic range, and/or total area occupied, and/or number of discrete occurrences since European settlement have been reduced by at least 90% and either or both of the following apply (i or ii): <ul style="list-style-type: none"> i) geographic range, and/or total area occupied and/or number of discrete occurrences are continuing to decline such that total destruction of the community is imminent (within approximately 10 years); ii) modification throughout its range is continuing such that in the immediate future (within approximately 10 years) the community is unlikely to be capable of being substantially rehabilitated. b) Current distribution is limited, and one or more of the following apply (i, ii or iii): <ul style="list-style-type: none"> i) geographic range and/or number of discrete occurrences, and/or area occupied is highly restricted and the community is currently subject to known threatening processes which are likely to result in total destruction throughout its range in the immediate future (within approximately 10 years); ii) there are very few occurrences, each of which is small and/or isolated and extremely vulnerable to known threatening processes; iii) there may be many occurrences but total area is very small and each occurrence is small and/or isolated and extremely vulnerable to known threatening processes. c) The ecological community exists only as highly modified occurrences that may be capable of being rehabilitated if such work begins in the immediate future (within approximately 10 years).
Endangered (EN)	<p>An ecological community that has been adequately surveyed and found to have been subject to a major contraction in area and/or was originally of limited distribution and is in danger of significant modification throughout its range or severe modification or destruction over most of its range in the near future.</p>

Category	Definition
	<p>An ecological community will be listed as Endangered when it has been adequately surveyed and is not Critically Endangered but is facing a very high risk of total destruction in the near future. This will be determined on the basis of the best available information by it meeting any one or more of the following criteria (a, b, or c):</p> <ul style="list-style-type: none"> a) The geographic range, and/or total area occupied, and/or number of discrete occurrences have been reduced by at least 70% since European settlement and either or both of the following apply (i or ii): <ul style="list-style-type: none"> i) the estimated geographic range, and/or total area occupied and/or number of discrete occurrences are continuing to decline such that total destruction of the community is likely in the short term future (within approximately 20 years); ii) modification throughout its range is continuing such that in the short term future (within approximately 20 years) the community is unlikely to be capable of being substantially restored or rehabilitated. b) Current distribution is limited, and one or more of the following apply (i, ii or iii): <ul style="list-style-type: none"> i) geographic range and/or number of discrete occurrences, and/or area occupied is highly restricted and the community is currently subject to known threatening processes which are likely to result in total destruction throughout its range in the short term future (within approximately 20 years); ii) there are few occurrences, each of which is small and/or isolated and all or most occurrences are very vulnerable to known threatening processes; iii) there may be many occurrences but total area is small and all or most occurrences are small and/or isolated and very vulnerable to known threatening processes. c) The ecological community exists only as very modified occurrences that may be capable of being substantially restored or rehabilitated if such work begins in the short-term future (within approximately 20 years).
Vulnerable (VU)	<p>In distribution and/or condition and whose ultimate security has not yet been assured and/or a community that is still widespread but is believed likely to move into a category of higher threat in the near future if threatening processes continue or begin operating throughout its range.</p> <p>An ecological community will be listed as Vulnerable when it has been adequately surveyed and is not Critically Endangered or Endangered but is facing a high risk of total destruction or significant modification in the medium to long-term future. This will be determined on the basis of the best available information by it meeting any one or more of the following criteria (a, b or c):</p> <ul style="list-style-type: none"> a) The ecological community exists largely as modified occurrences that are likely to be capable of being substantially restored or rehabilitated. b) The ecological community may already be modified and would be vulnerable to threatening processes, is restricted in area and/or range and/or is only found at a few locations. c) The ecological community may be still widespread but is believed likely to move into a category of higher threat in the medium to long term future because of existing or impending threatening processes.

Table 2 State PEC categories and definitions

Category	Definition
Priority One	<p>Poorly-known ecological communities</p> <p>Ecological communities that are known from very few occurrences with a very restricted distribution (generally ≤ 5 occurrences or a total area of ≤ 100ha). Occurrences are believed to be under threat either due to limited extent, or being on lands under immediate threat (e.g. within agricultural or pastoral lands, urban areas, active mineral leases) or for which current threats exist. May include communities with occurrences on protected lands. Communities may be included if they are comparatively well-known from one or more localities but do not meet adequacy of survey requirements, and/or are not well defined, and appear to be under immediate threat from known threatening processes across their range.</p>
Priority Two	<p>Poorly-known ecological communities</p> <p>Communities that are known from few occurrences with a restricted distribution (generally ≤ 10 occurrences or a total area of ≤ 200ha). At least some occurrences are not believed to be under immediate threat of destruction or degradation. Communities may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements, and/or are not well defined, and appear to be under threat from known threatening processes.</p>
Priority Three	<p>Poorly-known ecological communities</p> <ul style="list-style-type: none"> i) Communities that are known from several to many occurrences, a significant number or area of which are not under threat of habitat destruction or degradation or: ii) communities known from a few widespread occurrences, which are either large or with significant remaining areas of habitat in which other occurrences may occur, much of it not under imminent threat, or; iii) communities made up of large, and/or widespread occurrences, that may or may not be represented in the reserve system, but are under threat of modification across much of their range from processes such as grazing by domestic and/or feral stock, and inappropriate fire regimes. <p>Communities may be included if they are comparatively well known from several localities but do not meet adequacy of survey requirements and/or are not well defined, and known threatening processes exist that could affect them.</p>
Priority Four	<p>Ecological communities that are adequately known, rare but not threatened or meet criteria for Near Threatened, or that have been recently removed from the threatened list. These communities require regular monitoring.</p> <ul style="list-style-type: none"> i) Rare. Ecological communities known from few occurrences that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection, but could be if present circumstances change. These communities are usually represented on conservation lands. ii) Near Threatened. Ecological communities that are considered to have been adequately surveyed and that do not qualify for Conservation Dependent, but that are close to qualifying for Vulnerable. iii) Ecological communities that have been removed from the list of threatened communities during the past five years.
Priority Five	<p>Conservation Dependent ecological communities</p> <p>Ecological communities that are not threatened but are subject to a specific conservation program, the cessation of which would result in the community becoming threatened within five years.</p>

Definitions of Commonwealth Threatened Ecological Communities

Table 3 Commonwealth TEC categories and definitions

Category	Definition
Critically endangered	If, at that time, it is facing an extremely high risk of extinction in the wild in the immediate future.
Endangered	If, at that time, it is not critically endangered and is facing a very high risk of extinction in the wild in the near future.
Vulnerable	If, at that time, it is not critically endangered or endangered, and is facing a high risk of extinction in the wild in the medium-term future.

Appendix E

EPBC Database Search Results - Jandakot East Link

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EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information is available about [Environment Assessments](#) and the EPBC Act including significance guidelines, forms and application process details.

Report created: 08/10/13 15:34:51

[Summary](#)

[Details](#)

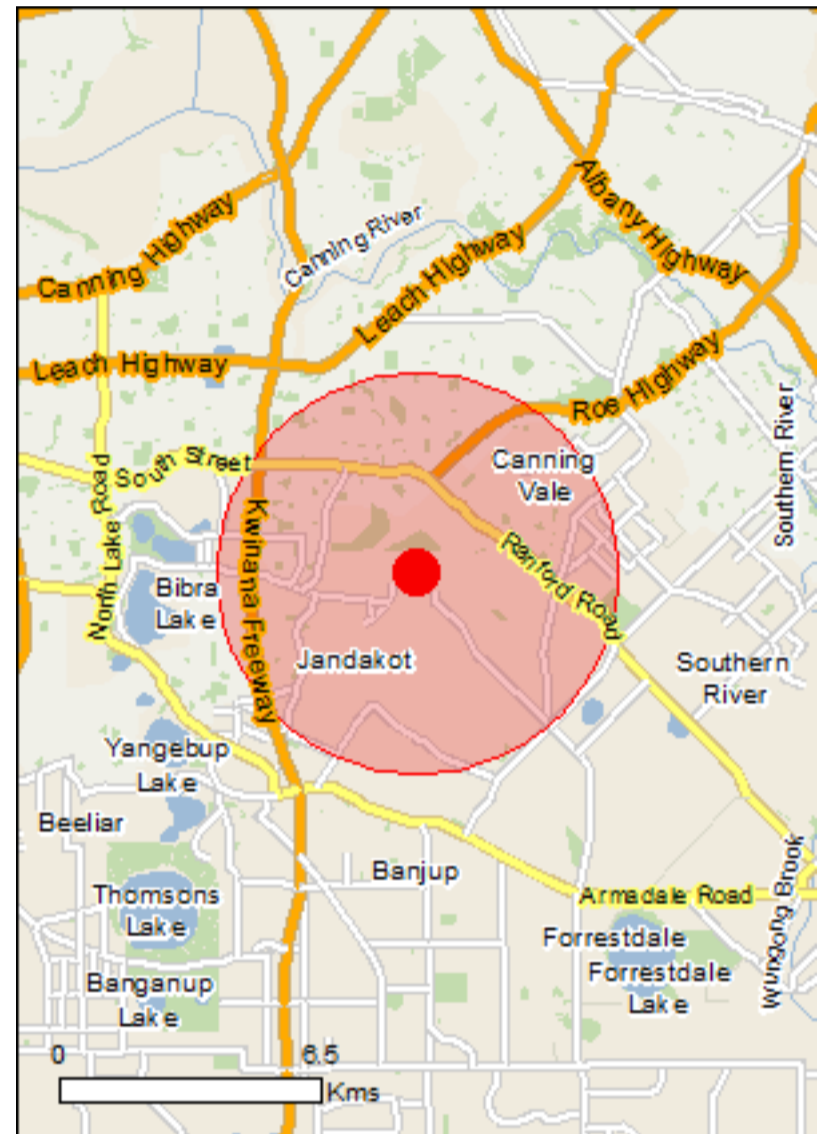
[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

[Caveat](#)

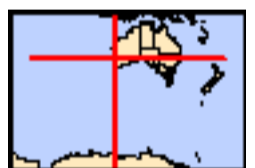
[Acknowledgements](#)



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Buffer: 5.0Km



Summary

Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the [Administrative Guidelines on Significance](#).

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	1
Great Barrier Reef Marine Park:	None
Commonwealth Marine Areas:	None
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	22
Listed Migratory Species:	7

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As [heritage values](#) of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place and the heritage values of a place on the Register of the National Estate.

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

A [permit](#) may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Land:	1
Commonwealth Heritage Places:	1
Listed Marine Species:	7
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Commonwealth Reserves Marine	None

Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

Place on the RNE:	3
State and Territory Reserves:	None
Regional Forest Agreements:	None
Invasive Species:	41
Nationally Important Wetlands:	1
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Wetlands of International Importance (RAMSAR)	[Resource Information]
Name	Proximity
Forrestdale & thomsons lakes	Within 10km of Ramsar

Listed Threatened Species [\[Resource Information \]](#)

Name	Status	Type of Presence
Birds		
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat known to occur within area
Calyptorhynchus banksii naso Forest Red-tailed Black-Cockatoo [67034]	Vulnerable	Species or species habitat may occur within area
Calyptorhynchus baudinii Baudin's Black-Cockatoo, Long-billed Black-Cockatoo [769]	Vulnerable	Roosting known to occur within area
Calyptorhynchus latirostris Carnaby's Black-Cockatoo, Short-billed Black-Cockatoo [59523]	Endangered	Species or species habitat likely to occur within area
Leipoa ocellata Malleefowl [934]	Vulnerable	Species or species habitat may occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area
Sternula nereis nereis Australian Fairy Tern [82950]	Vulnerable	Species or species habitat known to occur within area
Mammals		
Dasyurus geoffroii Chuditch, Western Quoll [330]	Vulnerable	Species or species habitat likely to occur within area
Pseudocheirus occidentalis Western Ringtail Possum [25911]	Vulnerable	Species or species habitat likely to occur

Name	Status	Type of Presence within area
Setonix brachyurus Quokka [229]	Vulnerable	Species or species habitat may occur within area
Plants		
Andersonia gracilis Slender Andersonia [14470]	Endangered	Species or species habitat may occur within area
Caladenia huegelii King Spider-orchid, Grand Spider-orchid, Rusty Spider-orchid [7309]	Endangered	Species or species habitat known to occur within area
Centrolepis caespitosa [6393]	Endangered	Species or species habitat likely to occur within area
Darwinia foetida Muceha Bell [83190]	Critically Endangered	Species or species habitat likely to occur within area
Diuris micrantha Dwarf Bee-orchid [55082]	Vulnerable	Species or species habitat likely to occur within area
Diuris purdiei Purdie's Donkey-orchid [12950]	Endangered	Species or species habitat known to occur within area
Drakaea elastica Glossy-leafed Hammer-orchid, Praying Virgin [16753]	Endangered	Species or species habitat known to occur within area
Drakaea micrantha Dwarf Hammer-orchid [56755]	Vulnerable	Species or species habitat known to occur within area
Grevillea curviloba subsp. incurva Narrow curved-leaf Grevillea [64909]	Endangered	Species or species habitat may occur within area
Lepidosperma rostratum Beaked Lepidosperma [14152]	Endangered	Species or species habitat likely to occur within area
Thelymitra manginii K.Dixon & Batty ms. [67443]	Endangered	Species or species habitat may occur within area
Villarsia calthifolia Mountain Villarsia [10886]	Endangered	Species or species habitat may occur within area

Listed Migratory Species [\[Resource Information \]](#)

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
Migratory Marine Birds		
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
Leipoa ocellata Malleefowl [934]	Vulnerable	Species or species habitat may occur within area

Name	Threatened	Type of Presence
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Migratory Wetlands Species		
Ardea alba Great Egret, White Egret [59541]		Breeding known to occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat likely to occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat may occur within area

Other Matters Protected by the EPBC Act

Commonwealth Land [\[Resource Information \]](#)

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Name
Commonwealth Land -

Commonwealth Heritage Places [\[Resource Information \]](#)

Name	State	Status
Natural		
Jandakot Airport Area	WA	Indicative Place

Listed Marine Species [\[Resource Information \]](#)

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
Birds		
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardea alba Great Egret, White Egret [59541]		Breeding known to occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat likely to occur within area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Pandion haliaetus Osprey [952]		Breeding known to occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat may occur within area

Extra Information

Places on the RNE

[[Resource Information](#)]

Note that not all Indigenous sites may be listed.

Name	State	Status
Natural		
Ken Hurst Park and Adjacent Areas	WA	Indicative Place
Beeliar Regional Park and Adjacent Areas	WA	Interim List
Jandakot Airport Area	WA	Registered

Invasive Species

[[Resource Information](#)]

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resources Audit, 2001.

Name	Status	Type of Presence
Birds		
Acridotheres tristis Common Myna, Indian Myna [387]		Species or species habitat likely to occur within area
Anas platyrhynchos Mallard [974]		Species or species habitat likely to occur within area
Carduelis carduelis European Goldfinch [403]		Species or species habitat likely to occur within area
Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
Passer domesticus House Sparrow [405]		Species or species habitat likely to occur within area
Passer montanus Eurasian Tree Sparrow [406]		Species or species habitat likely to occur within area
Streptopelia chinensis Spotted Turtle-Dove [780]		Species or species habitat likely to occur within area
Streptopelia senegalensis Laughing Turtle-dove, Laughing Dove [781]		Species or species habitat likely to occur within area

Name	Status	Type of Presence
Sturnus vulgaris Common Starling [389]		Species or species habitat likely to occur within area
Turdus merula Common Blackbird, Eurasian Blackbird [596]		Species or species habitat likely to occur within area
Mammals		
Bos taurus Domestic Cattle [16]		Species or species habitat likely to occur within area
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Funambulus pennantii Northern Palm Squirrel, Five-striped Palm Squirrel [129]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Rattus norvegicus Brown Rat, Norway Rat [83]		Species or species habitat likely to occur within area
Rattus rattus Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Anredera cordifolia Madeira Vine, Jalap, Lamb's-tail, Mignonette Vine, Anredera, Gulf Madeiravine, Heartleaf Madeiravine, Potato Vine [2643]		Species or species habitat likely to occur within area
Asparagus aethiopicus Asparagus Fern, Ground Asparagus, Basket Fern, Sprengi's Fern, Bushy Asparagus, Emerald Asparagus [62425]		Species or species habitat likely to occur within area
Asparagus asparagoides Bridal Creeper, Bridal Veil Creeper, Smilax, Florist's Smilax, Smilax Asparagus [22473]		Species or species habitat likely to occur within area
Asparagus plumosus Climbing Asparagus-fern [48993]		Species or species habitat likely to occur within area
Brachiaria mutica Para Grass [5879]		Species or species habitat may occur within area
Cenchrus ciliaris Buffel-grass, Black Buffel-grass [20213]		Species or species habitat may occur within area
Chrysanthemoides monilifera Bitou Bush, Boneseed [18983]		Species or species habitat may occur within

Name	Status	Type of Presence area
Chrysanthemoides monilifera subsp. monilifera Boneseed [16905]		Species or species habitat likely to occur within area
Genista linifolia Flax-leaved Broom, Mediterranean Broom, Flax Broom [2800]		Species or species habitat likely to occur within area
Genista monspessulana Montpellier Broom, Cape Broom, Canary Broom, Common Broom, French Broom, Soft Broom [20126]		Species or species habitat likely to occur within area
Genista sp. X Genista monspessulana Broom [67538]		Species or species habitat may occur within area
Lantana camara Lantana, Common Lantana, Kamara Lantana, Large-leaf Lantana, Pink Flowered Lantana, Red Flowered Lantana, Red-Flowered Sage, White Sage, Wild Sage [10892]		Species or species habitat likely to occur within area
Lycium ferocissimum African Boxthorn, Boxthorn [19235]		Species or species habitat likely to occur within area
Olea europaea Olive, Common Olive [9160]		Species or species habitat may occur within area
Pinus radiata Radiata Pine Monterey Pine, Insignis Pine, Wilding Pine [20780]		Species or species habitat may occur within area
Protasparagus plumosus Climbing Asparagus-fern, Ferny Asparagus [11747]		Species or species habitat likely to occur within area
Rubus fruticosus aggregate Blackberry, European Blackberry [68406]		Species or species habitat likely to occur within area
Sagittaria platyphylla Delta Arrowhead, Arrowhead, Slender Arrowhead [68483]		Species or species habitat likely to occur within area
Salix spp. except S.babylonica, S.x calodendron & S.x reichardtii Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497]		Species or species habitat likely to occur within area
Salvinia molesta Salvinia, Giant Salvinia, Aquarium Watermoss, Kariba Weed [13665]		Species or species habitat likely to occur within area
Tamarix aphylla Athel Pine, Athel Tree, Tamarisk, Athel Tamarisk, Athel Tamarix, Desert Tamarisk, Flowering Cypress, Salt Cedar [16018]		Species or species habitat likely to occur within area
Reptiles		
Hemidactylus frenatus Asian House Gecko [1708]		Species or species habitat likely to occur within area
Nationally Important Wetlands		[Resource Information]
Name		State
Gibbs Road Swamp System		WA

Coordinates

-32.08649 115.8863

Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World Heritage and Register of National Estate properties, Wetlands of International Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

For species where the distributions are well known, maps are digitised from sources such as recovery plans and detailed habitat studies. Where appropriate, core breeding, foraging and roosting areas are indicated under 'type of presence'. For species whose distributions are less well known, point locations are collated from government wildlife authorities, museums, and non-government organisations; bioclimatic distribution models are generated and these validated by experts. In some cases, the distribution maps are based solely on expert knowledge.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

The following groups have been mapped, but may not cover the complete distribution of the species:

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

- [-Department of Environment, Climate Change and Water, New South Wales](#)
- [-Department of Sustainability and Environment, Victoria](#)
- [-Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [-Department of Environment and Natural Resources, South Australia](#)
- [-Parks and Wildlife Service NT, NT Dept of Natural Resources, Environment and the Arts](#)
- [-Environmental and Resource Management, Queensland](#)
- [-Department of Environment and Conservation, Western Australia](#)
- [-Department of the Environment, Climate Change, Energy and Water](#)
- [-Birds Australia](#)
- [-Australian Bird and Bat Banding Scheme](#)
- [-Australian National Wildlife Collection](#)
- Natural history museums of Australia
- [-Museum Victoria](#)
- [-Australian Museum](#)
- [-SA Museum](#)
- [-Queensland Museum](#)
- [-Online Zoological Collections of Australian Museums](#)
- [-Queensland Herbarium](#)
- [-National Herbarium of NSW](#)
- [-Royal Botanic Gardens and National Herbarium of Victoria](#)
- [-Tasmanian Herbarium](#)
- [-State Herbarium of South Australia](#)
- [-Northern Territory Herbarium](#)
- [-Western Australian Herbarium](#)
- [-Australian National Herbarium, Atherton and Canberra](#)
- [-University of New England](#)
- [-Ocean Biogeographic Information System](#)
- [-Australian Government, Department of Defence](#)
- [-State Forests of NSW](#)
- [-Geoscience Australia](#)
- [-CSIRO](#)
- Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the [Contact Us](#) page.

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Appendix F

Constraints Map

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Appendix E

Workshop Notes - Project Reference Group

Appendix E Workshop Notes - Project Reference Group

Core Project Team:

- Mohsin Muttaqui (DoP), John.Chortis (DoP), Shannon Savage (DoP), Rick Drennan (DoP).
- Troy Bozich (City of Canning).
- John Fraser (Jandakot airport).
- John McDonald (City of Cockburn).
- Gavin.Ponton (City of Melville).
- Lucas Viljoen (AECOM), Teresa Matassa (AECOM).

Project Reference Group:

- Mohsin Muttaqui (DoP), Shannon Savage (DoP), Rick Drennan (DoP), Berto Santana (DoP).
- Troy Bozich (City of Canning).
- John Fraser (Jandakot Airport).
- John McDonald (City of Cockburn), Michael Littleton (City of Cockburn), Ossie Pereira (City of Cockburn).
- Ashis Parajuli (MRWA).
- Christine Moro (AECOM), Lucas Viljoen (AECOM), Claudia La Pegna (AECOM), Catherine Krens (AECOM).

An apology was received from Gavin Ponton from the City of Melville. However the City's inputs were received by email and provided as input to the workshop and included in the findings.

Notes of Meeting

Jandakot Airport East Link

Subject	Opportunities and Constraints Workshop	Page	1
Venue	AECOM Perth Office	Time	9.00am - 12.00pm
Participants	Mohsin Muttaqui (DoP), Shannon Savage (DoP), Rick Drennan (DoP), Berto Santana (DoP), Troy Bozich (Canning), John Fraser (Jandakot airport), John McDonald (Cockburn), Michael Littleton (Cockburn), Ossie Pereira (Cockburn), Ashis Parajuli (Main Roads), Christine Moro (AECOM), Lucas Viljoen (AECOM), Claudia La Pegna (AECOM), Catherine Krens (AECOM)		
Apologies	Gavin Ponton (Melville), Andrew Trosic (Cockburn), Lindsay Broadhurst (Main Roads)		
		Date	21-Mar-2013
Distribution	As above		

Workshop Objectives

- To review the history of the project from the stakeholders' perspectives.
- To identify the areas of importance for each stakeholder.
- Stakeholders identify the opportunities and constraints for each of the five route options.

No	Item	Action	Date
1	<p>Welcome and project overview</p> <ul style="list-style-type: none"> - Christine welcomed the group and outlined the processes for the workshop. - Lucas provided background information regarding Jandakot airport as a growing specialised centre. Department of Planning has initiated the project to investigate a second access to the airport from the east. - Shannon clarified that the Federal Government approved the plan for a second access but no road alignment was determined at that time. - The five options were explained to the group. - AECOM's role is to identify a preferred route in consultation with stakeholders and community groups. 		
2	<p>Jandakot airport overview</p> <ul style="list-style-type: none"> - Jandakot airport is currently developing their next Master Plan to be approved in 2014. They would like the current connection issues to be resolved and included in the Master Plan. - An eastern connection is considered crucial to get traffic in and out without taking extra flow through the airport. - Future Jandakot airport development is going to consist of warehouses and distribution facilities. 		

No	Item	Action	Date
	<ul style="list-style-type: none"> - It is anticipated that the majority of traffic will be normal cars with some truck movements. 		
3.	<p>City of Melville overview</p> <ul style="list-style-type: none"> - Lucas informed the group of City of Melville's point of view in their absence. - Option 2 is considered the preferred option. There could be an opportunity to move the intersection with Ranford Road south east to provide for a single connection to the waste facility and future park and ride facility. - Option 1 is also viable but has strong opposition from adjacent residents. - Option 3 and 3a will impact the Resource Recovery Centre. - Option 4 is supported as a secondary route to reduce traffic on Ranford Road. 		
4	<p>City of Canning Overview</p> <ul style="list-style-type: none"> - Option 1 will require two sets of signals to service the park and ride facility. - Option 2 going further south of the waste facility will service the park and ride facility better. - Support for Option 4 as a secondary route. 		
5	<p>Summary/Outcomes</p> <ul style="list-style-type: none"> - All stakeholders agreed that an eastern link to Jandakot airport is critical. - The Department of Planning have initial comments from the community but further consultation is required. - There was a general consensus that Option 1 and Option 2 (amended) were the preferred routes. - Option 3 was eliminated due to substantial impacts on Ken Hurst Park. - Option 3a is considered problematic with Bannister Road and would need to be completed in conjunction with Option 2 & 4. It also creates severance issues, impacts 18 businesses, land take and right turn issues. - General consensus that Option 4 will be required as a secondary link in the future but not as part of this project as the eastern link. - The Option 4 route needs to be amended on map as the Gun Club will be relocated. - Summary of workshop information. 	<p>AECOM</p> <p>Lucas</p> <p>AECOM</p>	
6	<p>Next steps</p> <ul style="list-style-type: none"> - Multi-criteria assessment process on each route taking into consideration cost, land impact and environmental impacts. - This will be the tool to identify the preferred option, which will be taken to concept design. 	<p>AECOM</p> <p>AECOM</p>	

Appendix F

Community Information Session - Promotional Material & Feedback Information

Appendix F Community Information Session - Promotional Material & Feedback Information

Stakeholder groups informed of information evening:

- City of Canning, City of Melville, City of Cockburn and City of Gosnells representatives included in the Project Reference Group.
- Catherine Prideaux, representing the Department of Environment and Conservation Regional Parks representative and the Jandakot Regional Park Community Advisory Committee.
- Eddie Wajon, representing the Friends of Ken Hurst Park.
- Julie Robert, representing the South East Regional Centre for Urban Landcare representative.
- Peter Abetz, Member of the Legislative Assembly for Southern River.
- Tyson Burkett, representing the Southern Metropolitan Regional Council resource recovery facility.

The project team members that were available during the evening to discuss the Jandakot Eastern Link Road with community included the following:

- Department of Planning:
 - John Chortis, Planning Director
 - Mohsin Muttaqui – Planning Manager
 - Shannon Savage – Senior Planning Officer - Jandakot Eastern Link Road
 - Alex Watson – Senior Planning Officer – Canning Vale Sports Precinct.
- AECOM:
 - Lucas Viljoen, Senior Transport Engineer and Teresa Matassa, Senior Transport Planner
 - Andrew Batty, Principal Environmental Scientist and Catherine Krens, Senior Botanist.
- City of Canning:
 - Steve Atwell, Acting Executive Engineering and Technical Services
 - Troy Bozich, Manager Engineering Services.
- Jandakot Airport:
 - John Fraser, Managing Director.

Jandakot Eastern Airport Link - Community Information Session - Wednesday 24 July 2013

ATTENDANCE SHEET

Name	Address	Interest in the Eastern Link Road	Summary of Comments (if provided)
D Beers	18 Livingstone Drive, Canning Vale	Resident	Prefers Bannister Road Option - avoids traffic issues on Ranford Road south of Bannister Road Sporting facility - expand the Bannister / Nicholson Road complex or go to Ranford / Warton Road complex
F Beers	18 Livingstone Drive, Canning Vale	Resident	Option 3 is preferred as will prevent further congestion on Ranford Road (bridge already at crisis point). Although traffic will still back up at Ranford Rd / Bannister Rd intersection
Stewart Johnson	30 Guerin Avenue, Piara Waters	President - Canning Vale Football Club	Satisfied Option 2 is the most appropriate option and fully supports it - good access to airport, sports facility and future train/ bus station
Shirley Briggs	22 Fraser Road, Canning Vale	Resident	
Wayne Driver	34 Lydiard Retreat, Canning Vale	Resident and Vice President - Canning Vale Junior Football Club	100% in support of preferred Option 2
C. Filbey	Kennel Zone	Resident	
L. Russell	City of Canning	Stakeholder	
B Smith	18 Grand Promenade, Bayswater	Daily commute to Jandakot Airport (Pilot)	
Sharon Womersley	2 Pilot Road, Canning Vale	Treasurer - Canning Vale Junior Footpath Club, Clifton Oval Precinct	100% support for the preferred Option 2
Dave Harris	City of Gosnells	Stakeholder	
Gavin Ponton	City of Melville	Stakeholder	
Ian Scott	6 Bowles Court, Murdoch	JACC Secretary / Treasurer	
Phill Theunissen	5 Livingstone Drive, Canning Vale		
Colleen Horton	5 Wattle Place, Canning Vale		
Darius Molae	2-4 Harvard Road, Jandakot		Very supportive - fantastic proposal, will planned and feasible and will assist with resolving growing traffic issues around Jandakot Airport
Bob Martin	25 Livingstone Road, Canning Vale	Resident	Fully supports it - the sooner the better
Brett Greive	49 Geranium Place, Canning Vale	Parent - Canning Vale Junior Footpath Club,	Represent the Canning Vale Junior Football Club (800 young members) - desperate need for a new sports facility in Canning Vale, very supportive of Eastern Link Road as will support the construction of the proposed Canning Vale Sports Precinct
Trish Greive	49 Geranium Place, Canning Vale	Parent - Canning Vale Junior Footpath Club,	
Rhys Greive	49 Geranium Place, Canning Vale	Canning Vale Junior Football Club	
Tyson Greive	49 Geranium Place, Canning Vale	Canning Vale Junior Football Club	
Linda Smillie	1 Livingstone Drive, Canning Vale		
Odette Glisson	12 Retreat Mews, Canning Vale	Resident	
Gwynne Lennox	49 Gundaring Turn, Canning Vale	Canning Vale Football Club	
Larissa Lennox	49 Gundaring Turn, Canning Vale	Canning Vale Football Club	
Chris Murray	20 Livingstone Drive, Canning Vale	Resident	Prefers Option 3 If Option 2 is built - buffer wall should be placed on bush side of road
Kathryn Murray	20 Livingstone Drive, Canning Vale	Resident	If Option 2 is approved can it include a noise buffer wall (can already hear noise from Waste Facility)
W. Clarke	7 Roundtree Road, Brentwood	Airport Club Football Club	
Eddy Wajon	16 Eckersley Heights, Winthrop	Friends of Ken Hurst Park	Provided comment via email
Luke Woermann	26B St Pauls Crescent, Joondalup	Jandakot Airport	
Ned Schepis	PO Box 1610, Canning Vale	Canning Vale Sports Precinct	



Department of
Planning

GOVERNMENT OF
WESTERN AUSTRALIA

Jandakot Airport Eastern Link Road

Community information evening

Date: Wednesday 24 July 2013
Time: 5.00pm to 8.00pm
Venue: Perth Christian Life Centre
3 Rangeview Place, Canning Vale

The Department of Planning is progressing the planning and design work for the Eastern Link Road to Jandakot. The preferred road option being considered follows recent investigation and consultation with key stakeholders.

Interested members of the community are invited to an informal information evening that will provide an update on the planning and design of the new Eastern Link Road.

Representatives from the Department of Planning, the City of Canning and Jandakot Airport, along with traffic and environmental consultants working on the Eastern Link Road design will be on hand to respond to questions.

For more information, please contact Shannon Savage at the Department of Planning on 6551 9302, or visit www.planning.wa.gov.au and search for 'Jandakot Eastern Link Road'.

Why is an Eastern Link Road needed?

Jandakot Airport is the major General Aviation Airport in Western Australia, and is one of the busiest airfields and largest aviation training bases in Australia. It is also the home of the Royal Flying Doctor Service, Police AirWing, FESA and the water bombers.

Opportunities to improve road access between Jandakot and the surrounding south-eastern metropolitan area have been under investigation for a number of years. Currently, there are limited road connections through Jandakot, with only one airport access road linking north-west to Berrigan Drive and Karel Avenue.

The increasing local residential population; development of Jandakot Airport as a 'Specialised Centre' supporting new employment and businesses; and plans for new community facilities such as the Canning Vale Sports Precinct will have an increasing impact on the existing road infrastructure.

An additional road link to these activities will also ensure there is an alternative emergency access for critical services located at Jandakot Airport.

Background on planning for the Eastern Link Road

The concept of an Eastern Link Road was presented in the *Jandakot Airport Master Plan* (2009).

The Department of Planning has since investigated a number of route options that minimise environmental and community impacts yet still provide a safe and viable Eastern Road Link to Jandakot.

The investigation process included consultation with the City of Canning, City of Melville, City of Cockburn, Department of Transport, Main Roads WA, Jandakot Airport and environmental and community representatives.

Three preliminary route options were shortlisted for further investigation based on environmental, social and economic criteria (Figure 1).

- **Option 1:** Lothian and Leeming roads alignment
- **Option 2:** Johnston and Leeming roads alignment
- **Option 3:** Bannister, Clifton and Leeming roads alignment