

DIA REPORT COVER SHEET

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| Report Title | Ethnographic and Archaeological Site Identification Survey Report Jandakot Airport Master Plan | |
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OPEN

Ethnographic and Archaeological Site Identification Survey Report Jandakot Airport Master Plan



Prepared for

Jandakot Airport Holdings

by

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EXECUTIVE SUMMARY

Project Background

Jandakot Airport Holdings (JAH) is undertaking a Master Plan for the Jandakot Airport. Development proposals include; building a fourth runway, rehabilitation of conservation areas, ground clearance for commercial development and construction of two access roads to service Jandakot Airport. Australian Interaction Consultants (AIC) were engaged by The Planning Group on behalf of Jandakot Airport Holdings to undertake an Ethnographic and Archaeological Site Identification Survey of the Jandakot Airport Master Plan Project Development Area (PDA).

Department of Indigenous Affairs (DIA) Research

A search of the DIA register of Aboriginal sites revealed five (5) previously recorded sites that relate to Aboriginal heritage within a 4x5 km polygon search area incorporating the PDA.

Ethnographic Survey

An Ethnographic Site Identification Survey was conducted by AIC Heritage Consultants Damien Lafrentz and Sagitte Yom-Tov with the Combined Metropolitan Working Group, Independent Aboriginal Environment Group, Ballaruk and Bibbulmun groups and the Jacobs family between the 10th September 2008 and the 15th September 2008. Jandakot Airport Holdings was represented by Jim Hocking and The Planning Group was represented by Peter Simpson.

Ethnographic Survey Results

No ethnographic sites were identified in the Jandakot Airport PDA.

No ethnographic information was provided which could add to the record of sites (DIA 3513 Lukin Swamp, DIA 4309 Princep Road, DIA 4310 Kelso Road, DIA 4311 Acourt Road and DIA 4361 Hope Road – Jandakot) within the Jandakot Airport PDA.

The Aboriginal representatives' concerns and requests are outlined below:

- The Aboriginal representatives request a Heritage Management Plan is implemented by JAH as part of the Jandakot Airport Master Plan.
- The Aboriginal representatives request monitors be present during ground disturbing works in areas previously undisturbed within the PDA.
- The Aboriginal representatives request Aboriginal involvement in revegetation and notification of employment opportunities.
- The Aboriginal representatives request recognition and acknowledgement of Aboriginal culture at the Jandakot Airport, for example, in the form of statues, signage and naming opportunities.
- The Aboriginal representatives' request continued communication with Jandakot Airport Holdings in relation to this Master Plan and future development.
- The Aboriginal representatives request the least possible disturbance to flora and fauna.

- The Aboriginal representatives were extremely positive about the Master Plan linking various areas around the airport into an ecological corridor for flora and fauna and the conservation efforts JAH will put in place to protect the endangered spider orchid.
- The Aboriginal people requested copies of the flora and fauna survey reports and the Master Plan report are made available to them when completed.

Archaeological Survey

An Archaeological Site Identification Survey was conducted by AIC Archaeologists Chris Gotse and Sarah Lewis on the 29th August 2008. The surface visibility of the ground surface was low, approximately 10% in most areas of the PDA. The survey was completed by conducting pedestrian transects throughout the PDA at 25 m and 50 m intervals. A hand held GPS was used to accurately pinpoint locations.

Pedestrian transects at 25m intervals initially targeted Area 5 with the purpose of locating DIA 4309 Princep Road which was recorded as an artefact scatter by Stranger in 1974. DIA site 4309 could not be located, as the majority artefacts were collected by Stranger in 1974 for the West Australian Museum. Other possible factors for not relocating the site includes disturbance from road construction, firebreaks, erosion and low surface visibility due to dense vegetation cover. The remaining sections of Area 5 were surveyed with 50 m transects. Area 5 will be changed from conservation to commercial zoning for warehouse distribution.

The southeast section of Area 3 was also targeted with pedestrian transects at 25 m intervals with the purpose of locating DIA 3513 Lukin Swamp. This was also recorded as an artefact scatter by Quartermaine in 1990. The site was not located during the archaeological survey. This is mostly likely the result of a datum shift in GPS coordinates which should position the site further north in closer proximity to Lukin Swamp outside of the PDA. Area 3 is presently airport infrastructure and is proposed to include part of a fourth runway.

No new archaeological sites or previous DIA sites were located in the PDA during the Site Identification Survey of the proposed Jandakot airport expansion.

Conclusions

AIC makes the following conclusions:

1. No new ethnographic or archaeological sites were identified. However,
2. JAH would benefit from the implementation of a Heritage Management Plan to ensure that it's Master Plan and future development complies with the AHA.
3. There is potential for intact archaeological deposits which may contain cultural material in undisturbed areas of the Jandakot Airport PDA. Monitoring of ground disturbing activities will be recommended.
4. Previously recorded sites; DIA 4309 Princep Road, DIA 4310 Kelso Road and DIA 4311 Acourt Road, are no longer sites within the meaning of Section 5 of the AHA and AIC will submit site updates to DIA.
5. DIA 3513 Lukin Swamp could not be identified within the Jandakot Airport PDA.

6. At this time a Section 18 application is not required for the Jandakot Airport Master Plan to proceed.

Sites and Impact

The Jandakot Airport Master Plan will not impact on Aboriginal sites (see Table below):

| SITE ID/NAME | LOCATION | IMPACT | |
|--------------------------|---|--------|--------|
| | | TYPE | DEGREE |
| DIA 3513 Lukin Swamp | Could not be located within Area 3 of the Jandakot Airport PDA | None | None |
| DIA 4309 Princep Road | Within Area 5 of the Jandakot Airport PDA | None | None |
| DIA 4310 Kelso Road | Within Area 7 of the Jandakot Airport PDA | None | None |
| DIA 4311 Acourt Road | Part of site polygon is within Area 8 of the Jandakot Airport PDA | None | None |

Summary of sites and impact of the proposal

Overall Position

There are no archaeological or ethnographic constraints to the Jandakot Airport Master Plan.

Recommendations

AIC makes the following recommendations:

1. Jandakot Airport Holdings continue with its Jandakot Airport Master Plan.
2. Jandakot Airport Holdings implements a Heritage Management Plan for the Jandakot Airport Master Plan. The implementation of a Heritage Management Plan will ensure that JAH conducts its developments in a manner that complies with the *Aboriginal Heritage Act (1972)* and other statutory requirements in relation to areas of Aboriginal cultural significance.
3. Jandakot Airport Holdings engage Aboriginal representatives as monitors during ground disturbing activities in previously identified Aboriginal sites areas of the Jandakot Airport PDA.
4. Jandakot Airport Holdings continues to consult with Aboriginal people during the development process if its Master Plan impacts on Aboriginal cultural heritage.
5. Jandakot Airport Holdings consider all the concerns and requests raised by the Aboriginal people.
6. All Jandakot Airport Holdings staff and contacting personnel are made fully aware of their obligations under the *Aboriginal Heritage Act (1972)*. To facilitate this it is recommended that a copy of the Act is available on site for reference at all times.

Confidentiality

No information within this report was reported to be confidential or restricted.

Copyright

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Disclaimer

AIC attempts to give voice to the Aboriginal people who take part in surveys such as the one reported here. However AIC neither claims the knowledge revealed or vouches for the veracity of the information provided. AIC consults with Aboriginal people who have expressed an interest in the heritage of an area being surveyed. In instances where ethnographic information is not presented, it should not be presumed that heritage values are not present. Aboriginal people may withhold information for cultural reasons. This report will reflect their views and concerns.

GPS Datum and Limitations

The GPS datum used during this survey was **MGA 94**. Whereas we endeavour to pinpoint geographical/site locations, the limitations of handheld GPS devices will create inaccuracies on occasion. Also, the potential for error from datum shift is ever present.

AIC Contributors

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Acknowledgements

AIC acknowledges the input and participation of the Aboriginal Representatives who have contributed by providing information about the culturally significant attributes and features of the survey area.

Our appreciation for the input and participation of the staff of The Planning Group and Jandakot Airport Holdings is also acknowledged.

Abbreviations

| | |
|--------------|--|
| ACMC | Aboriginal Cultural Material Committee |
| AIC | Australian Interaction Consultants |
| CMWG | Combined Metropolitan Working Group |
| DIA | Department of Indigenous Affairs |
| IAEG | Independent Aboriginal Environment Group |
| GPS | Global Positioning System |
| JAH | Jandakot Airport Holdings |
| MGA | Map Grid of Australia |
| NTC | Native Title Claimant Group |
| PDA | Proposed Development Area |
| The Act /AHA | <i>Aboriginal Heritage Act 1972 (WA)</i> |
| TPG | The Planning Group |
| WGS | World Geodetic System |
| BOM | Bureau of Metrology |

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1 INTRODUCTION

1.1 Brief

Jandakot Airport Holdings (JAH) is undertaking a Master Plan for the Jandakot Airport. Development proposals include; building a fourth runway, rehabilitation of conservation areas, ground clearance for commercial development and construction of two access roads to service Jandakot Airport. Australian Interaction Consultants (AIC) were engaged by The Planning Group on behalf of Jandakot Airport Holdings to undertake an Ethnographic and Archaeological Site Identification Survey of the Jandakot Airport Master Plan Project Development Area (PDA).

1.2 Proposal Details

The Proposed Development Areas (refer to Figure 2) include:

- Area 1A would be changed from Commercial to Conservation zoning, enabling a connected continuous conservation area with Ken Hurst Park and Jandakot Regional Park. In a meeting on 29th July 2008, the Managing Director of JAH, John Fraser, and Peter Cock of The Planning Group indicated orchids will be transplanted in this area.
- Area 1B would remain a conservation area. However, an access road will be constructed through it.
- Area 2 is presently a conservation area. In a meeting on 29th July 2008, the Managing Director of JAH, John Fraser indicated that part of this area will be utilised to construct the fourth runway.
- Area 3 is presently airport infrastructure and includes part of the proposed fourth runway area.
- Area 4 is presently zoned for commercial development and is partially cleared.
- Area 5 and would be changed from Conservation to Commercial zoning for warehouse distribution.
- Area 6 is earmarked for future aviation and commercial development.
- The highly disturbed sand mine Areas 7 and 8, vested with the City of Canning, are proposed to be leased by JAH and revegetated for publicly accessible conservation purposes. The topsoil removed from construction in other areas will be reused in Areas 7 and 8.
- Area 9 Ken Hurst Park is owned by the City of Melville and is not part of this survey.

1.3 Proposed Development Area

The boundary coordinate for the proposed development area (PDA) are as follows:

| EASTING | NORTHING |
|---------|----------|
| 391474 | 6445729 |
| 396119 | 6449300 |

Table 1: PDA coordinates – MGA 94, Zone 50

Figure 1: Locality Map

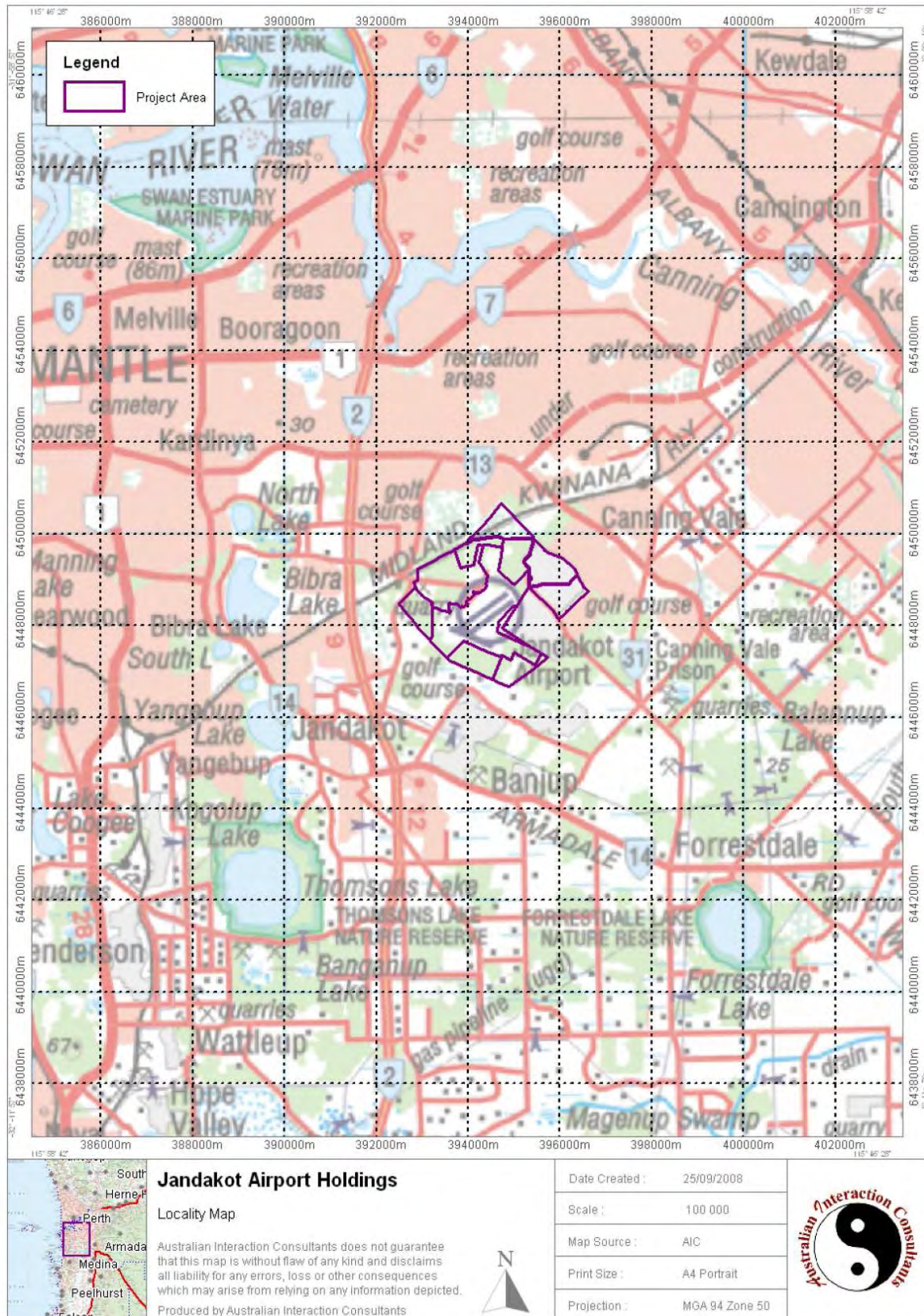
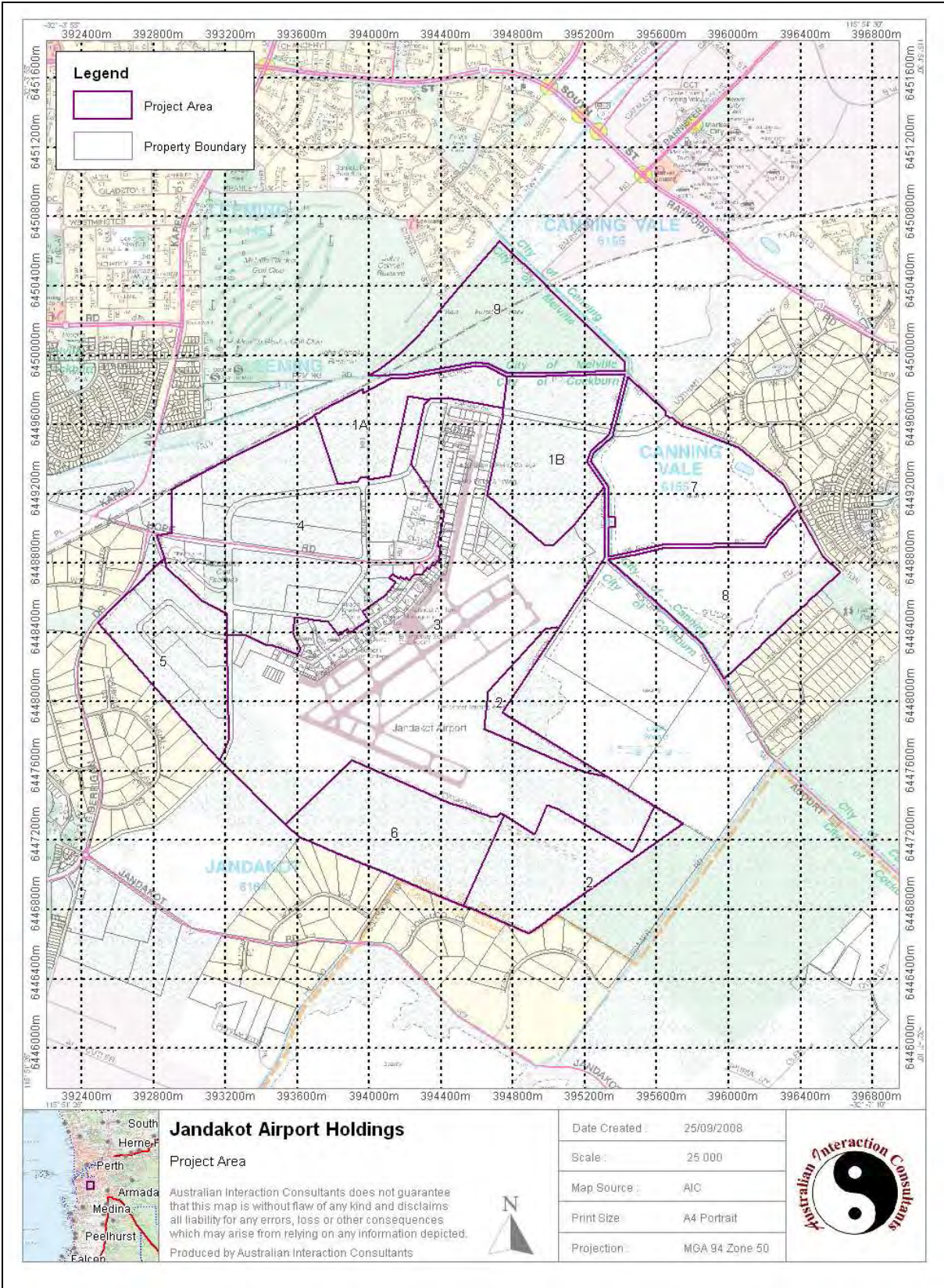


Figure 2: Project Map



2 METHODOLOGY OVERVIEW

1. Environmental Background Research.

2. **Archival Research.** Archival research consisting of DIA research and desktop study of previously recorded sites and surveys, as well as from other sources. The DIA Inquiry System is periodically updated and research results are current to this report only.

3. An **Ethnographic Site Identification Survey** of the Jandakot Airport PDA, which involved:

- Background research, including DIA research and other related material.
- The identification of Aboriginal people and groups that have a connection with, and knowledge of, the PDA;
- Pre-consultation with the identified people and groups;
- A field inspection of the PDA with the identified people and groups who decided to participate.

Refer to the Ethnographic Survey section of this report for details.

4. An **Archaeological Site Identification Survey** of the Jandakot Airport PDA, which involved:

- the identification of previously recorded DIA sites
- systematic survey of the PDA to locate archaeological sites
- research of the PDA's environmental characteristics

Refer to the Archaeological Survey section of this report for details.

5. **Reporting the Results**, including:

- The preparation of a preliminary advice and draft report;
- The distribution of the preliminary advice and draft report to all participating groups for their comment;
- And, the submission a final report to all groups including the DIA Perth office.

3 ENVIRONMENTAL BACKGROUND

3.1 Climate

The climate at Jandakot Airport is similar to that of Perth Metropolitan Region which experiences mild Mediterranean type climatic conditions. Jandakot is situated in the Köppen sub-tropical climatic zone that characteristically experiences dry summers. The mean maximum temperature occurs in February at 24.2°C, and the mean minimum temperature is 11.3°C and occurs in July and August (BOM 2008). In winter, cold fronts and associated low-pressure systems move across the southern Western Australia resulting in majority of the rainfall (Watson et al. 2004: 17). The average rainfall of the region is approximately 836.5 mm with the majority of rainfall occurring from May to August (BOM 2008). A combination of high and low-pressure systems and sea breezes, control the wind patterns experienced at Jandakot Airport (Watson et al. 2004: 17).

3.2 Geology and Geomorphology

The Perth Basin is a geological unit that began forming in the Late Permian. Perth and the Swan River are situated on the Perth Basin and extend from the Darling Fault in the east, to Rottnest Island in the west, north to the Murchison River and south to the Southern Ocean. This basin is a trough filled with Phanerozoic sediments underlying a mantle of Quaternary deposits (Seddon 1972: 3). The Swan Coastal Plain forms the central section of this geological unit and is a natural unit in terms of its geology, soils, climate and vegetation. It extends for about 80 km north and south of the Perth metropolitan area.

The Swan Plain is divided into two physiographic units; the Coastal Belt and the Bassendean Dune System. The oldest and the most easterly of the dune systems is the Bassendean System. Formerly these were Middle Pleistocene beach sands along the old coastline. The system is approximately 8-13km wide and the sands are characteristically pale grey white, medium grained, moderately sorted with black heavy minerals scattered throughout (Watson et al 2004: 19). The Bassendean sands are low in calcium and iron (Seddon 1972: 10). A number of intertidal lakes and seasonal swamps are present in the swales between dunes. The Jandakot Airport is located within the Bassendean Dune System and approximately 3 km the Spearwood System.

The Bassendean System is then followed by the Coastal Belt which comprises of the Spearwood and the Quindalup Dune Systems. The Spearwood System consists of limestone overlaid by Aeolian yellow brown sand of variable depths (City of Rockingham 2006: 11). The Spearwood sands have been subjected to considerable redistribution which obscures the boundaries between the Spearwood and the Bassendean systems (Ecoscape 2002: 93).

The most easterly and youngest of these large dune systems is known as the Quindalup Dunes, which form the present coastline. The Quindalup Dunes were formed during the last 7,000 years when sea levels were rising and overlie the older Spearwood dune system (City of Rockingham 2006). The Pinjarra Plains in the east are comprised of a combination of material blown in from the dunes and material washed down from the Darling Scarp.

3.3 Flora and Fauna

The different vegetation types of this region are associated with the different soil types and therefore the vegetation complexes correspond to the main geomorphological units. The Bassendean Dune systems have the highest diversity of plant species in the area due to the stable dunes. The area is predominantly Banksia woodland which is dominated by *Banksia attenuata*, *Banksia menziesii*, *Banksia ilicifolia*, *Eucalyptus tottiana* and *Nuytsia floribunda* with a dense understorey of sclerophyll shrubs (Watson et al. 2004: 21).

The bushland at Jandakot Airport has been entered on to the Register of National Estate through the nomination of the Australian Heritage Commission. Jandakot Airport bushland was nominated as it is one of the few remaining areas of intact bushland representative of the Swan Coastal Plain. The Jandakot bushland also has a rich density and diversity with 192 species of lower strata vegetation been recorded (Register of National Estate 2008). In the Jandakot Airport bushland there are also contains a number of uncommon and rare species of plants including the Grand Spider Orchid (*Caladenia hueglinii*) which is listed as and endangered species (Register of National Estate 2008).

European settlement in the Jandakot area has impacted heavily on the survival of many of the faunal species in the area. The Jandakot Airport Bushland supports a wide variety and large density of native faunal species. There are also a number of rare and threatened animal species that inhabit the Jandakot Airport Bushland. The Carnaby's Black Cockatoo (*Calyptorhynchus latirostris*) is considered an endangered species that visits the bushland to feed within the Banksia woodland (Watson et al. 2004: 29). The Southern Brown Bandicoot (*Isodon obesulus*) and the Western Brush Wallaby (*Macropus irma*) are considered both near threatened species also inhabit the Jandakot Airport bushland (Watson et al. 2004: 29). Wallabies and other macropod species would have been popular food sources for the Aboriginal population in the Jandakot area previous to European occupation.



Plate 1: Carnaby's Black Cockatoos

3.4 Previous Land Use

In 1844, surveyor JW Gregory recorded *Jandacot*¹ as the Aboriginal name of a lake south west of Kelmscott. Lake Jandakot (now known as Lake Forrestdale) became well known as a watering hole on a track between the Canning River and Pinjarra. The name 'Jandakot', meaning 'place of the whistling eagle', was then adopted as the name of the suburb (Landgate n.d.).

Jandakot was utilised for grazing activities from 1867. Experienced vegetable and orchard gardeners were attracted to the Cockburn region when Fremantle and Perth grew rapidly due to Western Australia's gold rush. The Jandakot grey sand was sufficiently productive to support a large population (City of Cockburn n.d.).

Housing developments then commenced in the post war years. Jandakot airport, a major General Aviation Airport in Western Australia, opened in 1963 and is now the busiest airfield and largest aviation training base in Australia (Jandakot Airport n.d.).

¹ The spelling was recorded in various forms until *Jandakot* was finally adopted.

4 ARCHIVAL RESEARCH

4.1 Methodology

A search of the Department of Indigenous Affairs Register of Aboriginal Sites database provides a background to both the archaeological and ethnographic sites in the area, as well as providing an indication of the nature and frequency of surveys which have been completed under the Heritage Act. This establishes the heritage context from which the potential impact of the proposed works and the likelihood of identifying any further sites or heritage issues may be assessed.

AIC conducted a search of the Sites Register maintained by DIA on 25th June 2008 to ascertain the number and types of sites previously recorded in the Jandakot Airport PDA. The search involved accessing the database via on-line access, downloading the results and using GIS technology *Mapinfo* to plot the registered sites on a map to indicate their proximity to the proposed works.

Based on that search area, a print out of recorded sites was obtained and analysed. Research was undertaken at the DIA offices in Perth, to view the individual site files of all recorded sites as well as relevant reports of previous surveys. The area searched to identify previously recorded sites that are included within the PDA and contiguous with it is contained within the following coordinates:

| MGA Coordinates - MGA Zone: 50 | |
|--------------------------------|------------------|
| Easting 391474 | Northing 6445729 |
| Easting 396119 | Northing 6449300 |

The GPS datum used in this report is MGA Zone 50, unless otherwise stated. The site coordinates were obtained from DIA site files. Other sources were then obtained for further background information relevant to the PDA.

4.2 Registered Aboriginal Sites

The DIA search revealed five (5) previously recorded Aboriginal sites in the vicinity of and within the PDA.

| ID | NAME | ACCESS | STATUS | TYPE | LOCATION | COMMENTS |
|------|------------------------|--------|--|--------------------------------|-----------------------|--|
| 3513 | Lukin Swamp | Open | Permanent | Artefacts/ Scatter, Camp | 395389 E 6447399 N | 40x16 m artefact scatter of 50 artefacts including quartz and fossiliferous chert flakes, chips and a core, as well as a basalt anvil stone. |
| 4309 | Princep Road | Open | Insufficient Information 'Not a Site' | Artefacts/ Scatter | 392700 E 6448575 N | 20 artefacts of quartz and fossiliferous chert flakes, flaked pieces, fragments, chips, backed blades, scrapers, a lumps and an adze |
| 4310 | Kelso Road | Open | Permanent | Artefacts/ Scatter | 395789 E 6449249 N | 61 quartz and fossiliferous chert artefacts including flakes, flake pieces, chips, scrapers, adzes, fabricators, chisel-like tools, lumps and a blade |
| 4311 | Acourt Road | Open | Permanent | Artefacts/ Scatter | 395799 E 6448209 N | sparse artefact scatter consists of quartz, chert and other material artefacts including lumps, chips, scrapers, a flake, a flaked piece, an adze and a fabricator |
| 4361 | Hope Road, Jandakot | Open | Stored Data 'Not a Site' | Artefacts/ Scatter | 392200 E 6449050 N | Sparse artefact scatter of 6 artefacts consisting of chips, scrapers and a fabricator made of quartz, fossiliferous chert and other materials. Some shell was also collected from this area. |

Table 2: Registered Aboriginal Sites in the Vicinity of the PDA

DIA 3513 Lukin Swamp

This site was recorded by Quartermaine in 1990 while undertaking a survey in relation to proposed Jandakot airport extensions (O'Connor and Quartermaine 1990). A small artefact scatter was identified on open sandy ground that had been cleared of vegetation (firebreak). Over 50 artefacts were found over an area 40 m by 16 m, including quartz and fossiliferous chert flakes, chips and a core. One basalt anvil stone was recorded at the site. The potential for stratification of sub-surface material at this site was noted, however, its potential is considered low due to the erosion in the area. This site is considered to have moderate significance due to the variety of artefact materials and types, as well as the potential for stratified material. This site was described as a seasonal campsite that overlooked the Lukin Swamp, approximately 300 m away. This site is on the permanent

register under sections 5 (a) and 39.2 (c) of the Act. This site is located in Area 3 of the PDA in the proposed fourth runway area, at 395389 E 6447399 N Zone 50.



Plate 2: In the vicinity of DIA 3513 Lukin Swamp



Plate 3: In the vicinity of Lukin Swamp

DIA 4309 Princep Road

This site was recorded by Stranger in 1974 when the artefacts were collected by the West Australian Museum. The ACMC states there is insufficient information to deem it a site. A sparse artefact scatter was located on a sand hill bordering a 'winter swamp' of Melaleuca lowland. The 20 artefacts consisted of quartz and fossiliferous chert flakes, flaked pieces, fragments, chips, backed blades, scrapers, a lump, a steep scraper and an adze. In 1990, O'Connor located the site finding only one quartz chip (O'Connor and Quartermaine 1990). He indicated that the area had been greatly disturbed by road construction and firebreaks. This site is located in the south-western corner of the PDA in Area 5 at 392700 E 6448575 N Zone 50.



Plate 4: In the vicinity of DIA 4309 Princep Road

DIA 4310 Kelso Road

This site was recorded by Stranger in 1974 when the artefacts were collected by the Western Australian Museum. This artefact scatter consisted of 61 quartz and fossiliferous chert artefacts including flakes, flake pieces, chips, scrapers, adzes, fabricators, chisel-like tools, lumps and a blade. The site was originally located in an extensively cleared area, where there was excavation and disturbance associated with the quarrying of sand. The material was collected as it was distributed around the perimeter of the quarry and most found on the 'mullock heaps' of top soil, and debris and areas scraped bare of vegetation. Stranger indicated that there were probably further artefacts before the disturbance. This site is on the permanent register under sections 5 (a) and 39.2 (c) of the Act. It is located within the eastern part of the PDA, not currently leased by JAH, in Area 7 at 395789 E 6449249 N Zone 50.

DIA 4311 Acourt Road

This site was recorded by Stranger in 1974 when the artefacts were collected by the Western Australian Museum. This sparse artefact scatter consists of quartz, chert and other material artefacts including lumps, chips, scrapers, a flake, a flaked piece, an adze and a fabricator. This site has been disturbed through extensive clearing and quarrying of sand. This site is on the permanent register under sections 5 (a) and 39.2 (c) of the Act. Its polygon is partially located within the eastern part of the PDA, not currently leased by JAH, in Area 8 at 395799 E 6448209 N Zone 50.

DIA 4361 Hope Road Jandakot

This site was recorded by Stranger in 1974 when the artefacts were collected by the Western Australian Museum. This very sparse artefact scatter of 6 artefacts consists of chips, scrapers and a fabricator made of quartz, fossiliferous chert and other materials. Some shell was also collected from this area. This area has been cleared, excavated and heavily disturbed by railway maintenance, road upgrades and easement. Powerlines and other services are also present. This site was declared 'not a site' and is registered as stored data. It was revisited by Yates in 2002 when no artefactual material was found. The site is located outside the western boundary of the PDA at 392200 E 6449050 N Zone 50.

4.3 Heritage Survey Reports

The DIA search revealed fifteen (15) survey reports related to Aboriginal heritage in the general area. The most relevant of these are summarised below Table 3:

| DIA ID | TITLE | AUTHOR | DATE |
|--------|---|---|------|
| 19409 | Report of an Aboriginal heritage survey of the proposed Thompson's Lake Regional Centre, North Jandakot | Venz, T. and Glendenning, W. | 2001 |
| 20525 | Report of an archaeological survey on stage 7 Roe Highway extension from South Street to Kwinana Freeway | Harris, J. | 1998 |
| 20527 | Report on further archaeological investigations for Aboriginal sites Roe Highway stage 7 | Quartermaine, G. | 2003 |
| 20872 | Report on a survey for Aboriginal sites proposed Jandakot Airport extensions | O'Connor, R., Quartermaine, G. and Bodney, C. | 1990 |
| 20946 | The metro sites audit review [CLOSED] | Coldrick, B. | 2004 |
| 20977 | Roe Highway stage 7 extension (South Street to Kwinana Freeway) public environmental review: assessment number 1466 | Roe 7 Alliance | 2004 |
| 20978 | Roe Highway stage 7 extension (South Street to Kwinana Freeway) public environmental review: assessment number 1466: technical appendices | Roe 7 Alliance | 2004 |
| 22075 | Report of an Aboriginal assessment of Lots 80 and 82 Randford Road in Forrestdale, Western Australia | De Gand, D | 2005 |
| 23004 | Report of a desktop study of Aboriginal heritage issues relating to Lot 9501 Armadale Road, Jandakot, Western Australia | Australian Interaction Consultants | 2008 |
| 104261 | Report on Aboriginal heritage assessment of North Lake/Bibra Lake region. | O'Connor, R. and Associates | 1987 |
| 104379 | Australian research grants scheme: final report on the project the Swan Coastal Plain | Hallam, S. | 1986 |
| 104505 | Aboriginal sites in the Perth metropolitan area: a management scheme | Strawbridge, L. | 1988 |
| 105233 | Report on an Aboriginal site survey of the proposed South West Corridor Transport Reserve | O'Connor, R. | 1994 |
| 105699 | Aboriginal heritage issues and cable crossings: upper Canning River downstream from Nicholson Road traffic bridge adjacent downstream from Canning Bridge and Narrows Bridge utilising internal bridge structure Swan River adjacent upstream to Causeway | Machin, B. | 2001 |

| | | | |
|--------|--|----------------------------|------|
| 106204 | Metropolitan sites project southern region: draft report | Yates Heritage Consultants | 2002 |
|--------|--|----------------------------|------|

Table 3: DIA Reports in Proximity of the Jandakot Airport PDA

DIA 19409

Venz, T. and Glendenning, W., 2001. Report of an Aboriginal heritage survey of the proposed Thompson's Lake Regional Centre, North Jandakot. Unpublished report for Landcorp.

The project area for this survey was south-west to the Jandakot Airport PDA. The proposed scope included locating transport, retail, service, business, industrial and recreational land uses to the Thomsons Lake area to cope with population growth. It was also proposed to expand the existing Gateways shopping centre. One previously recorded ethnographic site was recorded in the survey area. Ten isolated artefacts were located in highly disturbed areas adjacent to waterways. These indicated potential for additional artefactual material to be located. A new campsite was located. Several Aboriginal consultants indicated that the whole area was significant for both mythological reasons and as a food resource area. Recommendations included applying for Section 18 consent, archaeological monitoring of ground clearing and landscaping activities, minimising impact on flora, fauna and potentially on a chain of lakes to the west.

DIA Report 20525

Harris, J., 1998. Report of an archaeological survey on stage 7 Roe Highway extension from South Street to Kwinana Freeway. Unpublished report for ERM Mitchell McCotter.

This project found no previously recorded archaeological sites within the project area, north of the Jandakot Airport PDA. Very sparse artefact scatters, primarily of flakes, chips and cores, were located in the area. The lack of grinding material and low number of artefacts suggests small transitory camps where butchering of animal produce or woodworking activities occurred. No new archaeological sites were located during this survey. Due to the high degree of disturbance in the area, the likelihood of locating further archaeological sites on the surface of the project area was reduced. Recommendations included avoiding disturbance of DIA 4361 Hope Road, Jandakot through construction or, if this is not possible, to apply for Section 18 consent.

DIA Report 20527

Quartermaine Consultants, 2003. Report on further archaeological investigations for Aboriginal sites Roe Highway stage 7. Unpublished report for Gutteridge Haskins and Davey Pty Ltd.

This survey located no new archaeological sites within the project area, north of the Jandakot Airport PDA. Five previously registered sites in the vicinity of the project area were noted. DIA 4361, Hope Road, Jandakot, a small artefact scatter considered of low significance, was located 300m of the proposed alignment. All artefacts from this site had previously been collected and the area has been extensively disturbed. A Section 18 application or a DIA review of its status was recommended if the site could not be avoided during development.

DIA Report 20872

O'Connor, R., Quartermaine, G. and Bodney, C., 1990. Report on a survey for Aboriginal sites proposed Jandakot Airport extensions. Unpublished report for the Federal Airports Corporation.

This survey was carried out in relation to construction of a new runway and possible future development. Previously registered archaeological sites included DIA 4309 Princep Road on the margin of the project area and DIA 4310 Kelso Road, DIA 4311 Acourt Road and DIA 4361 Hope Road, Jandakot within 2km from the project area. These were all artefact scatters, all artefacts of four sites were collected by the museum. DIA 4309 Princep Road was located in a heavily disturbed area. Only one quartz chip was found, due to the previous collection of artefacts. Most sites in the general area have been destroyed because of development. One new artefact scatter was located within the project area (later registered as DIA 3513 Lukin Swamp) and there was some potential for stratified archaeological material but this was offset by the erosion from sand movement. It was considered of moderate significance because of the presence of fossiliferous chert and stratigraphic potential. It overlooks Lukin Swamp, which suggests it was a seasonal campsite. It was concluded that small low density surface artefact scatters are the most prolific sites in the area and are mainly located at river, swamp and lake margins. The Aboriginal representatives J and C Coomer, I Warmdean, G Gydjap, S Anderson, W Bodney, V Narkle, V Mippy, N Cooper, M Abraham and D Narrier were consulted. No ethnographic sites were identified. Recommendations included obtaining Section 18 consents to disturb the two sites located within the project area, collection of surface artefacts and test-pitting of the newly located site to assess the stratigraphic potential.

DIA Report 20977

Roe 7 Alliance, 2004. Roe Highway stage 7 extension (South Street to Kwinana Freeway) public environmental review: assessment number 1466. Unpublished report for Main Roads, Western Australia.

This report examines the environmental aspects of the area and potential impact of the Roe Highway Stage 7 construction. This report outlined the existing environment, environmental issues and social issues. The project area is within the Bassendean Sands, forming an undulating landscape and comprising of highly leached, excessively drained soil and sandy swamps. The unstable sandy soils required management to prevent wind and/or water erosion and during revegetation of disturbed areas. The project area traversed the Jandakot Groundwater Mound, an unconfined aquifer, part of which is known as the Underwater Water Pollution Control Area (UWPCA). Management of impact to the groundwater was of paramount importance. Social issues to consider included noise level and impacts of construction. Post-construction and operational management, as well as future consultation commitments were outlined.

DIA Report 20978

Roe 7 Alliance, 2004. Roe Highway stage 7 extension (South Street to Kwinana Freeway) public environmental review: assessment number 1466: technical appendices. Unpublished report for Main Roads, Western Australia.

These appendices include the scoping document which outlined the environmental issues and impact from the highway construction north of the Jandakot Airport PDA. The priority

criteria for alignment selection ranged from impact on Declared Rare Fauna to visual impacts, once cost was taken into account. The implications of the existing environment were outlined, including soil type and groundwater quality. Flora and fauna impacts were discussed, which identified one species of Declared Rare Flora (*Caladenia huegellii* – Grand Spider Orchid) and three species of significant fauna (*Calyptorhynchus latirostris* – Carnaby's Black Cockatoo; *Isoodon obesulus* – Quenda; *Macropus irma* – Brush Wallaby). The issue of kangaroos crossing the highway was also discussed. Ken Hurst Park, Bush Forever site to protect and manage Regionally Significant remnant bushland, is situated adjacent to the road reserve. However, the Bush Forever initiative recognises the need for vital transport infrastructure. Social issues, such as access to bushland, site contamination, noise levels, Aboriginal and European heritage were also outlined.

DIA Report 22075

De Gand, D., 2005. Report of an Aboriginal assessment of Lots 80 and 82 Randford Road in Forrestdale, Western Australia. Unpublished report for the Department of Housing and Works.

This report surveyed an area east of the Jandakot Airport PDA. Eight (8) previously recorded Aboriginal sites, seven artefact scatters and one mythological site were found within a 6.5 km polygon including the survey area. D. Shepherd, M. Hill and R. Hansen were the Aboriginal people consulted on this survey. No previously recorded or new Aboriginal sites were located within the survey area and thus there were no ethnographic or archaeological impediments to development.

DIA Report 23004

AIC, 2008. Report of a desktop study of Aboriginal heritage issues relating to Lot 9501 Armadale Road, Jandakot, Western Australia. Unpublished report for Linc Property.

This report surveyed an area south of the Jandakot Airport PDA. Sixteen (16) previously recorded Aboriginal sites, predominantly artefact scatters and mythological sites were located within 5 km of Lot 9501 but not within it. It was concluded that there was low potential for cultural heritage material due to the survey area being highly disturbed from sand quarrying and other urban activities. However, three key features in close proximity suggest former Aboriginal significance of this location: 1) wetlands formerly occurred north-west of Lot 9501, which may have been utilised traditionally and historically, 2) the presence of a major dune of the Bassendean system, indicated by the use of the area as a commercial sand quarry, and 3) moderately dense and large artefact scatters were located nearby. Thus, a full ethnographic consultation and survey was recommended to ensure any ethnographic or historic sites are located and recorded.

DIA Report 104261

O'Connor, R. and Associates, 1987. Report on Aboriginal heritage assessment of North Lake/Bibra Lake region. Unpublished report for LeProvost, Semeniuk and Chalmer Environmental Consultants.

The proposed Roe Highway alignment is north of the Jandakot Airport PDA. Fifteen (15) previously recorded sites, mostly consisting of sparse artefact scatters, were in the vicinity

of the survey area. Aboriginal consultants K. Colbung, C. Bodney, V. Mippy, T. Holmes, M. Taylor, F. Collard and J Collard were opposed to the development between North Lake and Bibra Lake where DIA. Chains of freshwater lakes were utilised as tracks between camping areas and water sources. Mythologically, the *Waugal* inhabits these lakes and maintains the flow of the spring that feeds them. There was also opposition of the highway traversing through Roe Swamp. Recommendations included re-alignment alternatives and the proposition of partial construction raised above the ground.

DIA Report 104379

Hallam, S.J., 1986. Australian research grants scheme: final report on the project the Swan Coastal Plain. Unpublished report.

This report examines patterns of prehistoric Aboriginal occupancy of the Swan Coastal Plain and their changes over time, including post-colonisation. Frequent movement of Aboriginal groups generated networks of routes and occupation nodes and the Swan Coastal Plain has a high occurrence of sites. An archaeological analysis noted artefact assemblages showing clear phase characteristics. Phases were noted as the outcome of the reciprocal impact of changing populations, technology and the environment.

DIA Report 105233

O'Connor, R., Quartermaine, G. and Yates, A., 1994 Report on an Aboriginal site survey of the proposed South West Corridor Transport Reserve. Unpublished report for the State Planning Commission.

The South West Corridor Transport Reserve is approximately 80 km in length and stretches from Jandakot to Mandurah across the Swan Coastal Plain. Aboriginal representatives from the Ballaruk Aboriginal Corporation, the Medina Aboriginal Cultural Group and the Mandurah-based Windjan Progress Association were consulted on this survey. Some realignments of the plan were carried out in relation to concerns regarding swamps near the project area. No new Aboriginal sites were located during the course of this survey. Three isolated finds were discovered, consistent with artefact assemblages recorded in the region. Theoretically, there was moderate to high archaeological site discovery potential, due to the wetland environment. Nevertheless, the survey methodology utilised and the high percentage of areas intensely surveyed was considered adequate to have discovered any archaeologically significant sites.

4.4 Other Sources

Department of the Environment, Water, Heritage and the Arts, 2008. Recommendation Report: Commercial Development on Jandakot Airport (EPBC 2007/3599). Unpublished report for the Department of Infrastructure, Transport, Regional Development and Local Government.

This report assessed the draft Major Development Plan (2007) for Jandakot Airport under the *Environment Protection and Biodiversity Conservation Act 1999*. JAH proposed to:

- 1) Clear vegetation for a fourth runway, taxiways and associated works, new roads and commercial development
- 2) Establish an 'orchid park' from retained and translocated endangered Grand Spider Orchids,
- 3) Research the Grand Spider Orchids' conservation and distributional status.

A revised draft in 2008 included increasing the size of the orchid park and changing the amount of retained and translocated plants. The report outlines related documentation and public comments. The majority of public comments were opposed to the proposal, primarily based on environmental concerns. The Department recommended that the revised draft not be approved due to significant environmental impacts, as well as insufficient and inconsistent proposal details.

Watson, A Butland, M and Evans, D., 2004. Jandakot Airport Environment Strategy. Unpublished report for Jandakot Airport Holdings.

This report is a legal requirement by which the commonwealth measures the environmental performance of Jandakot Airport Holdings and outlines the environmental responsibilities of airport users. The environment strategy is reviewed and approved every five years. Vegetation at the airport has been listed on the Register of National Estate because of its regional significance, including one Declared Rare Flora species, the Grand Spider Orchid. Diverse fauna at the airport includes species of regional and national conservation significance including Carnaby's Black Cockatoo, the Brush Wallaby and the Southern Brown Bandicoot. Programs have been established to manage threats, such as introduced fauna species, weed invasion, increased fire risk and urban encroachment. Management plans have also been implemented to control environmental impacts from current operations, such as fuel and chemical use, solid waste disposal and wastewater production. Natural, European, National and Indigenous heritage were briefly mentioned. In relation to Indigenous heritage, no ethnographic sites were located but two archaeological artefact scatter sites were located in conservation areas at Jandakot Airport. One of these sites had artefacts removed for further study and the other site was recommended for further study but was not an impediment to future development (O'Connor and Quartermaine 1990). Further issues and their management outlined were air quality and noise, natural area management, energy and non-renewable resources.

Watson, A. and Evans, D., 2005. Jandakot Airport Master Plan. Unpublished report for Jandakot Airport Holdings.

This report is a legal requirement which provides a framework for future airport development and growth. It provides a plan for the next 20 years, taking into account

associated land use, environmental, ground access and engineering service issues. The master plan is reviewed and approved every five years. The most significant update of this 2005 master plan is the provision of a fourth runway, which will improve safety and efficiency when winds exceed 12 knots and the direction of landing and takeoff changes. Various runway options are explored, as are associated issues of support facilities and ground access. Further land use options are discussed, including commercial property development and conservation areas. Management of noise, natural and indigenous environments are included, as was the process of public consultation and public comment.

4.5 Discussion

Five (5) previously registered archaeological sites relate to the PDA. Four of these sites were recorded by Stranger in 1974 when the artefacts were removed by the Western Australian Museum. The other site was recorded by Quartermaine in 1990 while carrying out a survey for Jandakot Airport extensions. Two sites are recorded within the airport boundary, one registered with DIA as a permanent site. Three sites are located within areas JAH proposes to manage, but which are currently not within the Jandakot Airport boundary.

There is one DIA report specific to Jandakot Airport, carried out in 1990. Further reports relate to nearby developments and others are focused on the general metropolitan area. The surveys cover both archaeological and ethnographic surveys. The sites located were primarily archaeological in nature, predominantly artefact scatters.

Prior to intensified suburban and residential development in the area, the area was utilised by Aboriginal people for camping and hunting. This interpretation is supported by the artefact scatters recorded in the general area. However, the lack of grinding material and low number of artefacts suggests small transitory camps where butchering of animal produce or woodworking activities occurred.

Movement took place along identifiable tracks which passed by rivers and between wetlands and swamps forming a link between camping and hunting areas. Mythological significance is generally attributed to all waterways as having been created, formed and inhabited by the primary being of the Creative Era, the Waugal.

Due to the physical and spiritual Aboriginal connection to land, they are concerned about the environment. The PDA is located within the sandy Bassendean Sands, transverses the Jandakot Groundwater Mound and contains Declared Rare Flora and significant fauna. Jandakot Airport Holdings regularly review their management plan and environment strategy to address the PDA's specific environmental issues.

Most sites in the general area have been destroyed because of development or collection of artefacts. Due to the high degree of disturbance in the area, the likelihood of locating further archaeological sites on the surface of the PDA is reduced. However, DIA 3513 Lukin Swamp (mapped by the DIA as within the PDA) has some potential for stratified archaeological material.

5 ETHNOGRAPHY

5.1 Background

Ethnohistory

The Jandakot area is located in the gently undulating Bassendean Sands with swampy areas in low-lying land, characterised by a string of lakes and wetlands running north and south. Aboriginal occupation camps extended from north to south and from east to west from the foothills across the Swan Coastal Plain. Most leading archaeologists date Aboriginal occupation in the Perth area to approximately 38,000 years ago (Flood 1995:106).

The Jandakot area is part of a traditional Aboriginal network of communication routes (inland and coastal) and nodal points (usually located at water sources when Aboriginal people would gather to exploit the natural resources). This area lies within the traditional language group territory of the Whadjuk (Tindale 1974:242-243). Today the people of the South West identify themselves as Nyoongar² adopted from the generic term for person ('man'). The Whadjuk were one of eleven languages belonging to the Nyoongar language family (Yuwat, Balardung, Wajuk, Binjarub, Wiilman, Kaniyang, Wardandi, Bibbulman, Minang, Goreng, and Wudjaarri) that are today subsumed under the name 'Nyoongar' (Thieberger 1996).

The communication routes and occupation sites are associated with Dreamtime creative beings, especially the *Waugal* (Rainbow Serpent) as well as the spirits of the ancestors. The Dreamtime beings travelled across the landscape, had encounters with one another and created land features, such as the river systems, waterholes and landforms where they camped.

The Dreamtime beings are at the core of spiritual life for Aboriginal people, connecting them with the land and its resources. The *Waugal* dwells in water sources and maintains the quantity and the quality of the drinking water. If a site closely associated with the *Waugal* is desecrated in any manner, the *Waugal* will leave and the health of Aboriginal people associated with the area will suffer.

The waterways were critical to the survival of Aboriginal people and their food sources. The string of lakes and wetlands in the Swan Coastal Plain were 'a never-failing supply of fresh water from a chain of swamps at the back and wells fed by them are never dry' (Landor 1847: 65 cited by Hallam 1975: 66-67). Close to the Jandakot area (within four to five kilometres) stand three lakes that are part of this extensive system: North Lake, Bibra Lake and Yangebup Lake.

Aboriginal names for rivers and waterways, waterholes and lakes, including metaphorical references to water and riverbed, still place them as landmarks in Aboriginal consciousness. The Swan River, for example, has special significance to Aboriginal people who call it the 'Derbal Yaragan' (*der-bal* = an estuary; *yaragan* = river Bindon & Chadwick 1992: 43, 187).

The variety of plant and animal resources exploited by Aboriginal people in the area is recorded by European observers from the time of first settlement in 1829, including camping, hunting and gathering, and ceremonial activities. In addition, the settlers observed the Aboriginal firing of the countryside. This seasonal practice created open access ways through

² Nyoongar, Nyungar, Nyoongah, etc. There is no 'standardised' version, although Horton's (1994) orthography might be considered a standardisation.

bushland and encouraged new growth that in turn attracted grazing animals such as varieties of kangaroo. The practice is recorded for river valleys at the foot of the Darling scarp (Hallam 1975: 20-24, 61-62).

Some early settlers acknowledged Aboriginal possession and use of the land: 'The land appears to be apportioned to different families' (Armstrong 1836 cited in Carter and Nutter 2005: 11). However, the Aboriginal communication and occupation network represented vital living resources, and in historical times became a major source of conflict between Aboriginal people and incoming settlers. Europeans settled:

Not only in a general sense, by utilising the same tracts of country, but in a very specific sense, by using the same network of nodes (at water sources) linked by tracks, the European pattern of land use was based on (and modified) the Aboriginal pattern (Hallam 1975: 67).

The activities of the European settlers severely restricted Aboriginal land-use in these places, curbing movements and disrupting traditional hunting and fishing practices.

Consequently hostilities, incarcerations and shootings soon became commonplace as Aboriginal people sought to defend their land and means of sustenance. Yagan and his father Midgegooroo, a Whadjuk leader, were among the early casualties of European violence on the Swan River frontier.

Furthermore, disease was taking its toll on Aboriginal people. In 1832 whooping cough was prevalent, followed in 1833 by cholera (Green 1979: 95).

European memoirs from the 1850s suggest that Aboriginal people continued to live on their home territories alongside the settlers, pursuing their traditional life style independently but blending that lifestyle with a sort of patronage relationship between themselves and the settlers. However, by the first three decades of the Twentieth Century, that relationship had been eroded by restrictive legislation that removed Aboriginal civil rights. Fringe camps became home for many Nyoongar people, and centres for their social and recreational lives.

It took more than a generation before conditions began to improve for Nyoongar people in the South West at large. There are continuing associations between Nyoongah families and the areas where they have lived for generations. These are generally well known to other Nyoongars, a mutual recognition by which families identify their boundaries in the South West. In the 1970s, Wilf Douglas found that ties were maintained to traditional homelands. He remarked that after:

earlier forced movements and voluntary wanderings [they are now] ... back in the country inhabited by their ancestors, traditional stories have come to mind again, old vocabulary usages have been resumed, and local idioms and idiosyncracies have been restored or developed (Douglas 1976: 8).

What he said then is just as applicable today: Aboriginal people continue to hunt and gather bush food, pass on knowledge to the younger generations and to maintain Aboriginal sites.

5.2 Identification of Aboriginal Groups

The 'Right to Speak'

An Aboriginal consultant's 'right to speak' about their country is founded upon traditional precedent. Elders with specialised knowledge about the land and the traditions connected to it exercise choice as to whom to transmit their knowledge. Transmission includes showing the country and is part of the conferring of custodianship or 'inheritance' from the older generations to the younger generations: from father to son (usually the eldest son), or to a daughter, or from grandparent to grandchild. Peter Sutton uses the term stewardship:

Traditional Aboriginal rights in country do not exist in isolation from obligations ... the emphasis of the native title process on 'rights' obscures that fact that stewardship roles, even more than rights, lie at the heart of holding country in Aboriginal tradition. By stewardship I mean the care for and maintenance of different aspects of the country including its supernatural powers, knowledge of it, religious enactments or objects that relate to it, and physical care as well (Sutton 2001:25).

Formerly, the passing on of knowledge (lore) occurred within the Aboriginal extended family and was hardly ever revealed to those outside the family. But for the pragmatic requirements of surveys for Native Title or for Aboriginal Heritage, Elders - or younger persons given permission by their Elders to speak for the family country, or who inherit such rights on the death of an Elder - exercise a choice to make certain knowledge available outside the family. Thus another precedent has been established arising from legislation. The *Aboriginal Heritage Act (1972)* in the spirit of the law helps to safeguard Aboriginal interests; the requirements for a claimant group under the *Native Title Act (1993)* and *Native Title Amendment (1998)* are sufficiently exhaustive that for practical purposes their inclusion in Heritage surveys is justified as well. The latter is supported in a recent set of guidelines prepared jointly by the State Department of Housing and Works and the Department for Indigenous Affairs:

Aboriginal Consultants are selected initially through contacts in the local Aboriginal communities, referrals from the Department of Indigenous Affairs and those individuals listed as Native Title Claimants ... the existence of a native title claim is seen as sufficient to establish an Aboriginal person's 'right to speak' about heritage issues (DIA 2008).

A notable example where community referrals and legislation come together like this is the case of Perth metropolitan groups, where some Aboriginal consultants are selected because they are Native Title holders. Additionally, there are Elders widely acknowledged among both Noongar and non-Aboriginal people as having interests and customary rights in Aboriginal Heritage that, over time, are confirmed through their involvement in many Heritage surveys, in some cases for decades. Here it might be added that the 'care for and maintenance of different aspects of the country' noted by Peter Sutton stands in the forefront of these surveys.

Identification Process

Hon Michelle Roberts, Minister for Indigenous Affairs, outlines the Aboriginal representatives eligible, as considered by the APMC, to participate in heritage surveys:

For matters relating to notices to be submitted under section 18, it is the policy of the APMC that persons to be involved in Aboriginal heritage surveys should include those who hold native title as determined by the Federal Court, persons named as informants on Aboriginal site recording forms held in the Register of Aboriginal Sites at DIA, and persons identified, by professional heritage consultants, as having a known or claimed interest in an area (Hon Michelle Roberts 2007:1).

Identified Groups

The table below outlines the representatives consulted:

| GROUP | N.T.C. NUMBER | CONTACT PERSON/S |
|--|---------------------------|---|
| Combined Metropolitan Working Group – Native Title Claim under Single Noongar Claim (Area 1) | WC03/6 WAD6006/03– Active | Mr Robert Bropho, Mr Richard Wilkes, Mr Albert Corunna, Mr Greg Garlett, Mr Victor Warrell and Ms Delores Flowers |
| Ballaruk – Native Title Claim under Ballaruks Peoples | WC95/86 WAD149/98- Active | Mr Corrie Bodney |
| Bibbulmun | Not Applicable | Mr Ken Colbung |
| IAEG – Independent Aboriginal Environment Group | Not Applicable | Mr Sullivan (Patrick) Hume |
| Jacobs Family | Not Applicable | Cedric Jacobs |

Table 4: Aboriginal Groups Identified for Consultation

The Native Title Claims covering The Planning Groups’ PDA in Jandakot, Western Australia are the Combined Metropolitan Working Group (WC03/6 WAD6006/03– Active) and the Ballaruks Peoples (WC95/86 WAD149/98– Active).

Combined Metropolitan Working Group (CMWG)

CMWG is comprised of five families/groups:

1. Swan Valley Nyungah People (Elder Robert Bropho);
2. Derbal Yerrigan Nyoongars of the Swan River Plains (Elder Richard Wilkes);
3. Derbal Yerrigan Nyoongars of the Swan River Plains (Elder Albert Corunna);
4. Garlett Family Group (Elders Greg Garlett and Kelvin Garlett);
5. Warrell Family (Elders Victor Warrell and Delores Flowers).

The Combined Metropolitan Working Group has been identified for consultation on the proposal on the basis of their position as Native Title Claimants over the Perth Metropolitan region. In addition, the CMWG Elders are widely acknowledged amongst both Aboriginal and non-Aboriginal people as having knowledge, interests and customary rights in Aboriginal Heritage in the Perth Metropolitan region. These interests and rights are evident through the CMWG Elders’ involvement in numerous Heritage Surveys within Perth over many years and, in some cases, for decades.

Ballaruk

The Ballaruk are headed by Elder Corrie Bodney and his wife Violet Mippy. The Ballaruk identify as “Whadjuk” people, the Aboriginal group widely documented as belonging to the Perth Metropolitan area at the time of colonisation. The Ballaruk Native Title Claim is under Ballaruks Peoples (WC95/86) and is listed as active on the National Native Title Tribunal web site. Corrie Bodney has been involved in Aboriginal Heritage since the 1980s (including as one time President of the Aboriginal Advancement Council) and is considered highly knowledgeable in Aboriginal history and mythology of the Perth Metropolitan region.

The Ballaruk have been identified for consultation on the proposal because they have lived and raised family in Perth and are widely acknowledged amongst both Aboriginal and non-

Aboriginal people as having knowledge, interests and customary rights in Aboriginal Heritage over the Perth Metropolitan region. This is evident through the Ballaruk involvement in numerous Heritage Surveys and Aboriginal bodies within Perth over several decades.

Bibbulmun

The Bibbulmun are headed by Elder Ken Colbung and include members of his family and Phillip Prosser. Ken Colbung has been active in Aboriginal affairs and heritage in Western Australia and the Perth Metropolitan region. Ken Colbung was directly involved in the development of the AHA and both he and Phillip Prosser have served as members of the ACMC. Ken Colbung and Phillip Prosser are also named applicants on the Single Noongar Native Title claim and live in Perth.

The Bibbulmun have been identified for consultation on the proposal because they are widely acknowledged amongst both Aboriginal and non-Aboriginal people as having interests and knowledge in Aboriginal Heritage over the Perth Metropolitan region. This is clearly evident from Mr Ken Colbung's longstanding involvement and influence in Aboriginal Heritage in Western Australia, and in particular Nyoongah country.

Independent Aboriginal Environment Group (IAEG)

The Independent Aboriginal Environment Group (IAEG) is headed by Elders Patrick Sullivan Hume and Lena Crabbe and includes members of their families. Both Patrick Hume and Lena Crabbe live in Perth and have a longstanding involvement in Aboriginal affairs in the metropolitan area extending back to the 1970s (including Patrick Hume's position as one time President of the Aboriginal Advancement Council). IAEG are widely acknowledged, amongst both Aboriginal and non-Aboriginal people, as having knowledge, interests and customary rights in Aboriginal Heritage over the Perth Metropolitan region. This is evident through the IAEG Elders' involvement in numerous Heritage Surveys and Aboriginal bodies within Perth over several decades.

Jacobs Family

Cedric Jacobs is the spokesperson for the Jacobs family and has been included in a number of heritage surveys having formally expressed his interest to DIA in being consulted on heritage matters in the Perth metropolitan area. He claims to be a "bonafide bloodline traditional owner" and direct descendant of Yellagonga, an Aboriginal leader at the time of British settlement in 1829.

5.3 Methodology

Survey Type

In the completion of this project, AIC conducted an Ethnographic Site Identification Survey under the AHA of the Jandakot Airport Master Plan. This survey type was chosen because there are sites within the Jandakot Airport PDA, which may be impacted and for the purposes of applying for Section 18 under the AHA if required. The methodology has been informed by the Western Australian Government guidelines (see DIA 2008).

Information Collection

Ethnographic information was gathered using group discussion in the boardroom at Jandakot Airport Holdings offices at Jandakot Airport. All ethnographic information was recorded according to the wishes of the informants involved and cultural and confidentiality protocols were adhered to. All information was recorded by notebook and/or camera. The results were

confirmed with the Aboriginal representatives at the end of the survey. Copies of the preliminary advice and draft reports were posted to all Aboriginal groups inviting their comment. If any further ethnographic information was forthcoming, this was documented and the draft report was edited and finalised accordingly.

5.4 Survey

AIC telephoned the contact persons for the identified groups and discussed the Jandakot Airport Master Plan proposal. Arrangements were made for a Site Identification Survey of the PDA with representatives from each group. The survey was conducted with CMWG, Ballaruk, Bibbulmun, IAEG and Jacobs's family representatives between the 10th and 15th of September 2008 (refer to Table 5 below). On the various days of the survey, the survey party met at the JAH office, discussed project details and maps of the PDA. The Project Details and PDA were explained by Jim Hocking, Environment Manager from JAH and Peter Simpson from The Planning Group (TPG).

The following table outlines the AIC, Aboriginal and Client representatives in attendance at each consultation:

| DATE | AIC | ABORIGINAL | OTHER |
|------------|-------------------------------------|--|--|
| 10/09/2008 | Damien Lafrentz and Sagitte Yom-Tov | Bella Bropho, Toopy (William) Bodney, Kathy Penny, Naomi Bropho, Greg Garlett, Sherma Ugle, Kylie Garlett, Clive Davis, Albert Corunna, Gwen Corunna, Vanessa Corunna, Trina Corunna, Richard Wilkes, Olive Wilkes, Alison Wilkes, Lynley Wilkes, Alison Wilkes, Victor Warrell and Justin Warrell | Jim Hocking, Environment Manager from JAH and Peter Simpson from TPG |
| 10/09/2008 | Damien Lafrentz and Sagitte Yom-Tov | Maxine Farmer and Delores Flowers | Jim Hocking and Peter Simpson |
| 12/09/2008 | Damien Lafrentz and Sagitte Yom-Tov | Sullivan (Patrick) Hume, Rebecca Hume, Gladys Yarran and Jamie Smith; Corrie Bodney, Violet Bodney, Tanya Bodney and Steven Anderson | Jim Hocking and Peter Simpson |
| 12/09/2008 | Damien Lafrentz and Sagitte Yom-Tov | Cedric Jacobs, Karen Jacobs, Leslie Jacobs and Narelda Jacobs | Jim Hocking |
| 15/09/2008 | Damien Lafrentz and Ian Scott | Ken Colbung, Phil Prosser, Esanda Colbung and Melanie King | N/A [desktop at Esandra Colbung's house] |

Table 5: Ethnographic Survey Representatives

5.5 Results

Sites

The Aboriginal representatives identified no new ethnographic sites in the Jandakot Airport PDA. They noted nearby Lukin Swamp and indicated that the general area was rich in medicinal and food resources.

Concerns, Requests and Proponent's Responses

Overall, the Aboriginal representatives were pleased that the project addressed not only safety but also environmental concerns. They requested that they be consulted further once plans are concrete and to be kept informed during construction. They were, however, unhappy that they were not informed of the plans earlier, as well as construction that has already commenced on Jandakot Airport. *Jim Hocking of JAH and Peter Simpson from The Planning Group indicated that the present construction was approved before the current owners of JAH were involved. JAH are consulting with all stakeholders, including Aboriginal people, for this project and Master Plan and hope their incorporation of Aboriginal concerns will positively influence other developers to do the same. Any changes to the plans will require further consultation and, if the present plans are not completed within five years, the plans will be reviewed once more.*

The Aboriginal people requested the development have the least impact on flora and fauna as possible. Furthermore, they were concerned about future stormwater runoff from the new runway, carbon emissions and the disposal of wastes. One Aboriginal group requested copies of the flora and fauna survey reports. Suggestions to conserve the flora and fauna included: zoning Areas 7 and 8 as Reserves, planting low rather than high vegetation, placing netting (prior to planting) on areas to be revegetated as this protects any potential scatters and fencing aviation movement areas to keep wildlife from accessing these areas. An enquiry was made into whether there were any other airports proposed to reduce the aircraft movement at Jandakot Airport. *Jim Hocking and Peter Simpson indicated that flora and fauna surveys have been and will continue to be carried out; local species will be planted; Area 1A has been earmarked for conservation because of its high environmental value; the firebreak in Area 1 will reduce in width; Areas 7 and 8 will create a corridor link for wildlife; environmental standards need to be met in Areas 7 and 8 before development commences in Area 6; a specialist team will manage the conservation areas; King's Park is being consulted as they are orchid specialists; dieback control and weeding programmes have been put into place; domestic and feral animals are controlled as much as is possible; an electronic high pitched system is utilised to keep kangaroos away from aviation movement areas; any injured animals (a rare occurrence) are put into care/ JAH models potential risks of future infrastructure, monitor soils, runways and bores for contamination, follow restrictions in relation the Jandakot Mound, have instituted environmental plans for their tenants over the last six months and consider that the fourth runway will reduce carbon emissions by reducing taxiing time for aircraft. A new airport was proposed in the past but there was not enough support for it. JAH will consider the Aboriginal representatives' suggestions.*

The Aboriginal representatives enquired about the whereabouts of Aboriginal artefacts removed by the West Australian Museum in 1974. They requested any further sites uncovered need to be fully recorded and agreements be put into place for all future development. One Aboriginal representative cautioned against developing Area 6 as there are possible wet areas, which point to possible associated sites. The Aboriginal representatives

requested Aboriginal monitoring during ground disturbing works. *Jim Hocking and Peter Simpson indicated that they will attempt to locate the collected artefacts through AIC. AIC spoke to the DIA about removed artefacts and was told that WAM response to enquiries was that they are under resourced to locate the artefacts. Jim Hocking indicated that restricted access to the airport protects Aboriginal sites from outside influences and that security was upgraded two years ago. Further, if any cultural material is located during construction, the contractors must stop working and the artefacts will be investigated. JAH will consider an Aboriginal Heritage Management Plan.*

The Aboriginal representatives requested acknowledgement of Aboriginal culture and history, for example, through plaques, statues, as well as Aboriginal names for the conservation areas and the new runway. *Jim Hocking and Peter Simpson indicated that the planning has not yet advanced to details but Aboriginal acknowledgement will be considered. Runways, however, are practically named in terms of their location.*

The Aboriginal representatives requested Aboriginal involvement in revegetation of airport areas, some Aboriginal representatives specifying Aboriginal nursery involvement, the Nola Nursery in Wellard. Furthermore, they enquired about traineeships, scholarships and employment, as well as flying courses for Aboriginal people. They requested that they be kept informed when employment opportunities arise. *Jim Hocking and Peter Simpson indicated that local environmental groups, Aboriginal and non-Aboriginal community will be considered to assist with revegetation. Aboriginal people could have the opportunity to educate non-Aboriginal people about the environment. They will enquire about Ngulla Nursery. There are no restrictions in applying for employment at the airport. Unfortunately, JAH does not own any flying schools.*

The Aboriginal representatives stated that the Jandakot Airport Master Plan would be a positive result for an ecological corridor linking areas 1A, 1B, 2, 7, 8, Ken Hurst Park and the Jandakot Regional Park located to the south of the airport. The people stressed that they thought the ecological corridor was a very positive outcome as it would allow a consolidated area of flora and would allow fauna (like kangaroos and Carnaby's cockatoos) to actively move around the area. *Jim Hocking and Peter Simpson indicated that it was an aim of JAH to give something back to the local environment.*

5.6 Discussion

Prior to intensified suburban and residential development in the area, the area was utilised by Aboriginal people for camping and hunting. This interpretation is supported by the artefact scatters recorded in the general area.

The Jandakot area is part of a traditional Aboriginal network of communication routes which passed by rivers and between wetlands and swamps, forming a link between camping and hunting areas. Three lakes are located within 4 to 5 km from the Jandakot area and the PDA itself is located in close proximity to Lukin Swamp. The communication routes and occupation sites are associated with and created by Dreamtime beings, especially the *Waugal* (Rainbow Serpent) as well as the spirits of the ancestors. The Dreamtime beings are at the core of spiritual life for Aboriginal people, connecting them with the land and its resources.

The Aboriginal representatives who participated in the survey noted the PDA and wider area as being rich in food and medicinal resources. The concern all Aboriginal representatives

expressed for the flora and fauna of the area is directly related to the ongoing significance and importance of these resources in traditional and contemporary life. However the Aboriginal representatives were extremely positive about the Master Plan linking various areas around the airport into an ecological corridor for flora and fauna and the conservation efforts JAH will put in place to protect the endangered spider orchid.

The Aboriginal representatives consulted are the guardians of the Perth metropolitan area and hence Jandakot. The high rate of development in the area has destroyed many Aboriginal sites and hence the Aboriginal representatives' requests regarding the current whereabouts of removed artefacts, ongoing involvement in heritage surveys and in the management of Aboriginal sites. The Aboriginal representatives oppose the destruction of any sites of significance. They would like to see their heritage treated the same as European heritage.

Traditionally, without a written language, Aboriginal groups passed on all knowledge through oral transmission and demonstration. Each Aboriginal group consulted included a range of members who hold status and those members still learning information from others during the survey. The traditional practice of oral transmission was thus enacted during the survey.

The Aboriginal people's relationship to the land continues to be expressed spiritually in terms of the Dreaming stories, as well as having custodial responsibility to protect the natural environment and maintain one's guardianship of cultural knowledge for future generations.

6 ARCHAEOLOGY

6.1 Previous Archaeological Surveys

Majority of the archaeological surveys conducted in the regional area have been focussed around industrial and residential development and little academic research has been conducted. There have been general overviews into Aboriginal sites in the Perth metropolitan area but specific research around the Jandakot area has been through infrastructure development. These surveys concern designated sections of land with little information pertaining to the nature of Aboriginal heritage in the broader area being sought or included.

The increased rate of urbanisation in the Perth area and allied infrastructure developments has resulted in great disturbance to the original environmental contexts. This directly affects the likelihood of locating further intact surface archaeological material. Despite this, an indication of potential Aboriginal heritage within the vicinity of the development may be derived from examining the local environment and ascertaining what sites have previously been reported from such land units, as well as what has been reported by previous research conducted in the surrounding area.

Most of the archaeological surveys in the project area were originally conducted by Stranger in 1974 and the artefacts collected by the Western Australian Museum (WAM). Later archaeological surveys were conducted by Quartermaine and O'Connor (1990) predominantly in relation to the proposed Jandakot airport extensions which revealed DIA 3513 Lukin Swamp which revealed over fifty artefacts of quartz and fossiliferous chert. More recent archaeological investigations (2003) by Quartermaine for Roe Highway Stage 7 located no new Aboriginal sites but noted five previously recorded sites in the vicinity of the project area.

6.2 Previous Archaeological Research

The primary source of information for the Perth metropolitan area comes from the Perth Archaeological Survey undertaken by Hallam in the 1970s, which covered a section of the metropolitan area from the coast to the Darling Scarp (Hallam 1986). Over 300 sites were located and the survey remains the most extensive research yet undertaken in the Perth region. It was found that most sites are surface scatters of artefacts (commonly made of quartz) which are usually found in open sands near water sources.

The survey attempted to explain the variations in occupation patterns of pre-contact Aboriginal groups. The study suggested some initial patterning of site locations in the metropolitan area. Few sites were found on the coastal dunes or in the limestone units east of the Spearwood Dunes. The majority of sites were found on elevated dunes or sandy ridges near the margins of creeks, swamps and wetlands associated with the Bassendean Sands (Hallam 1986).

Anderson (1984) proposed a land-use model for prehistoric occupation on the Swan Coastal Plain. The model suggests that there was a more intensive use of the coastal plain than either the nearby open woodland or forest due to the differences in resource availabilities. Sites in the open woodland and forest do not exceed 6000 years ago. It appears that the Swan coastal plain maintained the largest population for most of the year, with the scarp and hills area being mainly utilised in winter and early spring (Anderson 1984: 35).

Exceptions to this trend are the permanent water holes and pools. The areas near the permanent water sources also have a higher site density and the favourable environment probably led to the use of these sites not being restricted to late winter/spring but also including summer/autumn visits (Vetch 1987:34-6). Hallam's (1986) research results indicated that the majority of sites lie around the lakes and swamp areas of the coastal plains, supporting Andersen land-use model.

The dates of the sites around the waterways showed that the number of sites double in the last few hundred years. Holocene site density in temporal sequences suggests an increase in population on the Coastal Plain rising to its highest prior to European contact.

The wetlands associated with the lakes which formerly extended from Geraldton to Mandurah clearly provided an abundant supply of food and resources for the Nyoongar people. The original presence of wetlands throughout the Bassendean Sands made them the favoured area of occupation for Aboriginal people throughout the year. The wealth of natural resources associated with these environments was also the focus of seasonal attention.

The records of the early settlers indicate that this chain of lakes formed a major highway of movement for people along which a rich social and ceremonial life was enacted at the appropriate time of year (Hammond 1933; Grey 1841). These Aboriginal pathways or 'runs' extend along the coast to Pinjarra and Mandurah and link up with paths across the Darling Scarp. This is supported by the ethnographic evidence provided by Indigenous informants in reports relating to the various ethnographic sites in the area.

Although few sites in the Perth region have been dated, an approximate date of 38,000 BP was claimed from Upper Swan (Pearce and Barbette 1981). The date is problematic as it has never been corroborated and some of the artefacts (i.e. microscrapers) are dubious for the claimed time period (Villiers 2008:72). More recent mid to late Holocene dates with a range of 6,000 to 1,000 BP have been obtained from the Bassendean Sands (Pearce 1977) and there is a date of 9,930 BP from Minim Cove on the Swan River (Clarke and Dortch 1977).

In the southwest Australia, prehistoric tool industries have been divided into two general phases (Mulvaney 1975; Dortch 1977). The earlier phase is comprised of small thick flake scrapers, bipolar cores, notched-denticular pieces, flakes from dicoidal cores and single multi-platform cores. These artefact types are from a variety of material including Eocene fossiliferous chert. The source of the fossiliferous chert is supposedly located off the western coast and under water after the marine transgression 6,000 to 8,000 years ago (Dortch 1977). The later phase in the tool industry is from 4,000 years ago and is characterised by artefact types from the "small tool tradition". Artefact types from this later phase include geometric microliths, bladelets, backed blades, adze flakes (Mulvaney 1975).

The two general tool industry phases were further refined by Hallam (1986) into four periods. The four phases of tool manufacturing suggested for the Swan Coastal Plain are:

- **Early:** low numbers of sites with artefacts including steep scrapers and the use of Eocene fossiliferous chert. This period extended to 5,000 BP.
- **Middle:** from 5,000 to 500 years ago. Sites found close to permanent water. Artefacts made of quartz and chert and include backed blades, adzes, scrapers and flakes.

- **Late:** from 500 years ago. Sites cluster on the coastal plain. Bipolar cores and artefacts manufactured on quartz dominate.
- **Historic:** from 1829 onwards. Assemblages include artefacts made on post-contact material such as glass, pottery and ceramics.

6.3 Archaeological Sites in the Jandakot Airport Region

All of the sites in the Jandakot Airport region are artefact scatters. These artefact scatters range from sparse scatters containing less than ten artefacts to large occupation scatters with over 50 artefacts. Quartz and fossiliferous chert occur in all of the scatters with quartz being the predominant material. Minor amounts of basalt and dolerite were also located in some of the larger artefact scatters. A variety of artefact types have been recorded including flakes, flake fragments, chips, cores, scrapers, adzes, fabricators, blades and backed blades. The artefact types in the Jandakot Airport area include microlith components suggestive of the later tool technology phase. However, the presence of fossiliferous chert indicates also apparently indicates usage from the earlier phase. It is possible that these artefact scatters from the transition between the earlier and the later tool technology phases around 5,000 BP.

The artefact scatters recorded in the region range from moderate to low significance. The larger and intact artefact scatters have higher significance as they display a wide variety of tool types and material and have the potential for sub-surface stratified material. The low significance artefact scatters have generally been subjected to ground disturbance and the site's integrity and distribution has been lost. It should also be considered that archaeological material has been previously collected from archaeological sites within the PDA and also in the immediate vicinity. DIA 4309 Prinsep Road was recorded by Stranger in 1974 when 20 artefacts were collected from the Western Australian Museum. Sixty one artefacts were collected by the WAM from DIA 4310 Kelso Road and 6 artefacts were collected from DIA 4361 Hope Road Jandakot in 1974 also. The sparse artefact scatter at DIA 4311 Acourt Road was also collected by WAM. All of these sites exist on the permanent register except for DIA 4361 Hope Road Jandakot which has been registered as stored data.

The probability of further locating archaeological sites in the PDA is considered low to moderate. In areas that have experienced ground disturbance there is little to no potential of locating new archaeological sites. The remaining bushland in the PDA has a moderate potential for locating archaeological sites. The high amount of ground vegetation in area would compromise identification of sites. Archaeological surveys should be conducted in summer when there is less ground vegetation to improve ground surface visibility.

6.4 Methodology

The Jandakot Airport PDA was archaeologically surveyed on the 29th August and the 1st and 2nd of September 2008 by AIC Archaeologists, Chris Gotse and Sarah Lewis. The PDA was analysed according to land units based on topography, water availability and the existence of previously recorded archaeological sites. This allowed the use of a predictive model for the study area, reflecting the increased likelihood of encountering archaeological material in undisturbed areas and close to previously recorded archaeological sites. The survey methodology utilised and the areas intensely surveyed are considered adequate to have discovered any archaeological sites.

The surface visibility of the ground surface was low, approximately 10% in parcels of relatively undisturbed areas of the PDA. This is due to the variability of the vegetation that constitutes Jandakot Airport bushland. When searching for sites and artefacts, most areas of bushland appear to have been disturbed at some point with established tracks and fire fighting trails dividing portions of bushland and conservation areas into 2ha – 12 ha parcels. Where larger parcels were assessed the PDA is dominated by Banksia woodland with an understorey of sclerophyll shrubs (see Plate 5).



Plate 5: Density of the Jandakot bushland within the PDA

However, the disturbed areas of the PDA had medium-high visibility (50 - 75%). Types of disturbance included road tracks, firebreaks and soil erosion (see Plate 6).



Plate 6: An access track in Area 1B

The areas of greatest archaeological potential were targeted first, namely, Areas 5 and 3, in which DIA 4309 Prinsep Road and DIA 3513 Lukin Swamp have been recorded respectively.

Areas 2 and 3 were also considered to have a higher potential for locating archaeological material due to the presence of Lukin Swamp to the east. Archaeological sites are commonly found in wetland areas with available water sources.

The areas targeted first were those considered to be of higher archaeological potential and were surveyed with pedestrian transects at 25 m intervals. This allowed these areas to be investigated more intensively. A hand held GPS was used to accurately pinpoint locations. Pedestrian transects at 25 m intervals initially targeted Area 5 with the purpose of locating DIA 4309 Prinsep Road. Area 5 will be changed from conservation to commercial zoning for warehouse distribution.

The southeast section of Area 3 was also targeted with pedestrian transects at 25 m intervals with the purpose of locating DIA 3513 Lukin Swamp. Area 3 is presently airport infrastructure and includes part of the fourth runway area (see Plate 7).



Plate 7: A view of Area 3 and Airport Infrastructure in the background

Area 2 was also intensively surveyed with 50 m pedestrian transects and is presently a conservation area and part of this area will also be used to construct the fourth runway.

Area 6 was surveyed with 50 m pedestrian transects as no previous archaeological sites have been recorded in the area. It will become conservation land if the leases over areas outside of Jandakot Airport (Areas 7, 8 and 9) are not secured.

Area 1B was surveyed with 50 m pedestrian transects targeting a 25 m corridor section which will have an access road constructed through it.

6.5 Survey Results

No archaeological sites were identified during the archaeological survey of the PDA. Pedestrian transects at 25 m intervals initially targeted Area 5 with the purpose of locating DIA 4309 Prinsep Road which was recorded as an artefact scatter by Stranger in 1974. However, the archaeological site could not be located. The remaining sections of Area 5 were also surveyed with 50 m pedestrian transects and no archaeological material was identified.

The southeast section of Area 3 was also targeted with pedestrian transects at 25 m intervals with the purpose of locating DIA 3513 Lukin Swamp, recorded as an artefact scatter and camp by Quartermaine in 1990. This site could not be located.

Area 2 was also intensively surveyed with 50 m pedestrian transects and is presently a conservation area and part of this area will be used to construct the fourth runway. An isolated artefact (quartz crystal flake) was found in Area 2 at 394701 E 6446813 N (see Plate 8).



Plate 8: An isolated quartz crystal flake found in Area 2

Area 6 was surveyed with 50 m pedestrian transects as no previous archaeological sites have been recorded in the area. No archaeological material was identified which is most likely the result of low ground surface visibility.

Area 1B was surveyed with 50 m pedestrian transects targeting a 25 m corridor section which will have an access road constructed through it. No archaeological material was located in Area 1B.

Areas 7, 8 and 9 were not archaeologically surveyed. Area 9 is Ken Hurst Park and Areas 7 and 8 are currently vested with the City of Canning and leased for active sand mining operations.

Area 1A was not archaeologically surveyed as the area will not be subjected to ground disturbing works as it will be rezoned to conservation area.

6.6 Discussion

Previous archaeological and ethnographic surveys in the vicinity of the PDA indicate that Aboriginal people have utilised the immediate area in the past. All of the DIA sites in the general area of the PDA have been previously recorded as artefact scatters consisting of predominantly quartz and fossiliferous chert flakes which have features characteristic of later stone tool technology types. However, the lack of grinding material (e.g. mullers and grinding platforms) and low artefact density suggest transitory camps.

DIA sites 3513 Lukin Swamp, 4310 Kelso Road, 4311 Acourt Road and 4361 Hope Road - Jandakot have all been recorded as artefact scatters and a camp within the Jandakot Airport PDA. This indicates that Aboriginal people were utilising the Jandakot area for hunting and camping long before the European occupation.

No new archaeological sites or previous DIA sites were located in the PDA during the Site Identification Survey of the proposed Jandakot airport expansion.

The presence of an isolated artefact (quartz crystal flake) in Area 2 indicates Aboriginal activity in the area. Quartz is the predominant material in the artefact scatters that have been found in the Jandakot region. This artefact consists of microlith components and belongs to a later stone tool technology phase. Its present location may have been influenced by ground disturbance or possibly even due to the effects of wind or water erosion. No other archaeological material was located which is the result of the very low ground surface visibility in the area due to the presence of dense shrubs and leaf matter. The lack of archaeological material in this area reinforces the significance of the predictive model reflecting the lower potential for locating archaeological material in this densely vegetated land unit (Banksia Woodland). The presence of this artefact will have no impact on the proposed construction works.

7 SITES AND IMPACTS OF THE PROPOSAL

The Jandakot Airport Master Plan will not impact on Aboriginal sites (see Table below):

| SITE ID/NAME | LOCATION | IMPACT | |
|--------------------------|---|--------|--------|
| | | TYPE | DEGREE |
| DIA 3513 Lukin Swamp | Could not be located within Area 3 of the Jandakot Airport PDA. | None | None |
| DIA 4309 Princep Road | Within Area 5 of the Jandakot Airport PDA | None | None |
| DIA 4310 Kelso Road | Within Area 7 of the Jandakot Airport PDA | None | None |
| DIA 4311 Acourt Road | Part of site polygon is within Area 8 of the Jandakot Airport PDA | None | None |

Table 6: Sites and impact of the proposal

DIA 3513 Lukin Swamp

This artefact scatter and camp site is mapped by the DIA as being located in Area 3 (currently airport infrastructure and the location of a proposed fourth runway) of the Jandakot Airport PDA. This site was not identified during the archaeological survey. The AIC archaeologists surmise that this is mostly likely the result of a datum shift in GPS coordinates which should position the site further north in closer proximity to Lukin Swamp outside of the PDA. It will not be impacted by the Jandakot Airport Master Plan.

DIA 4309 Princep Road

This artefact scatter site is mapped by the DIA as being located in Area 5 (presently conservation but a proposed development area) of the Jandakot Airport PDA. This site was not identified during the archaeological survey due to its removal by the West Australian Museum in 1974. It is no longer a site within the meaning of Section 5 of the AHA. It will not be impacted by the Jandakot Airport Master Plan.

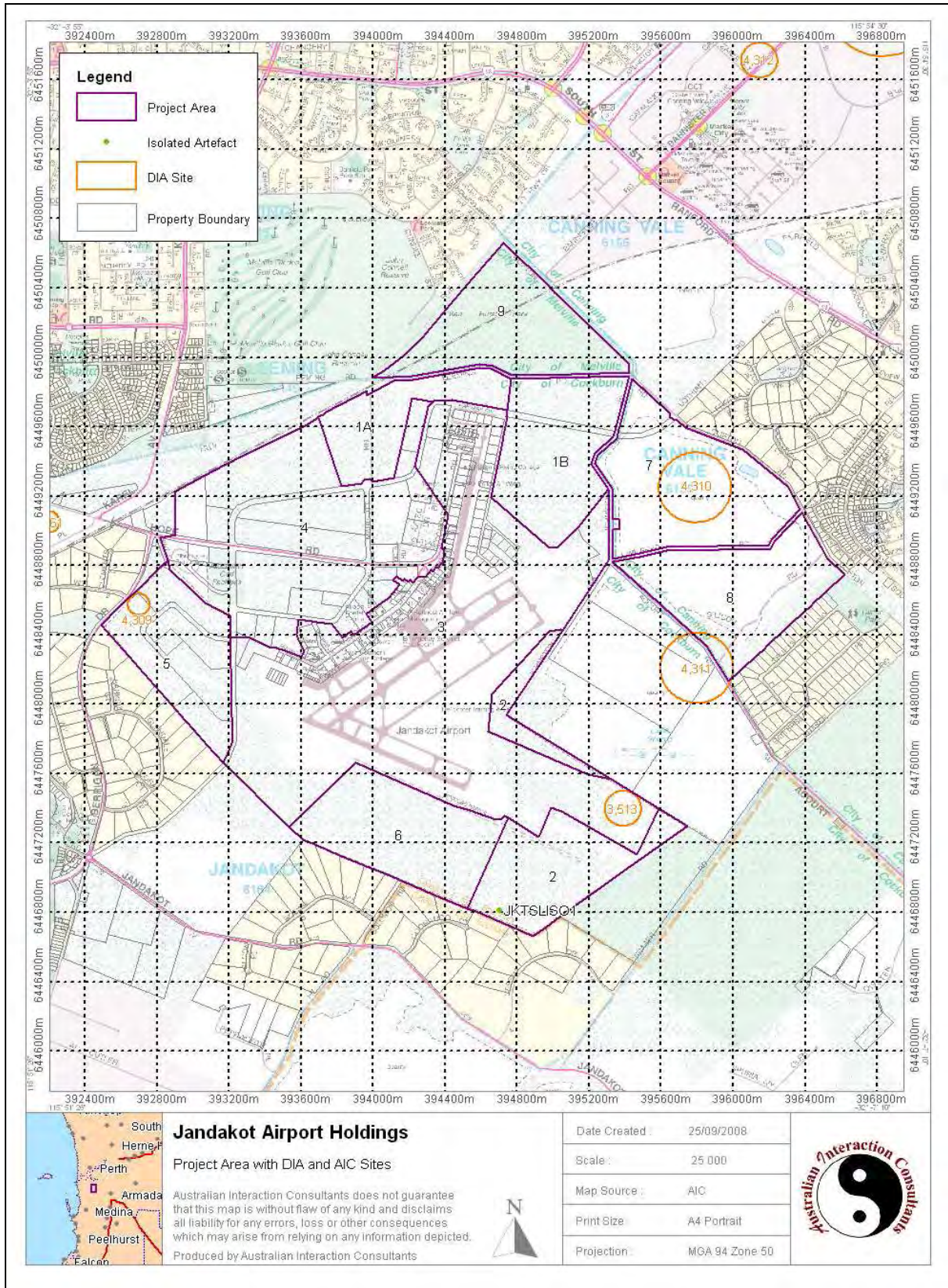
DIA 4310 Kelso Road

This artefact scatter site is mapped by the DIA as being located in Area 7 of the Jandakot Airport PDA. Area 7 is currently vested with the City of Canning and leased as a sand mining operation. The AIC archaeologists could not access Area 7 however the area is very highly disturbed from the sand mining operations. Further to this, the DIA site file states that the artefacts were removed by the West Australian Museum in 1974. DIA 4310 Kelso Road is no longer a site within the meaning of Section 5 of the AHA. It will not be impacted by the Jandakot Airport Master Plan.

DIA 4311 Acourt Road

This artefact scatter site is mapped by the DIA as having its site polygon crossing into Area 8 of the Jandakot Airport PDA. Area 8 is currently vested with the City of Canning and leased as a sand mining operation. The AIC archaeologists could not access Area 8 however the area is very highly disturbed from the sand mining operations. Further to this, the DIA site file states that the artefacts were removed by the West Australian Museum in 1974. DIA 4310 Kelso Road is no longer a site within the meaning of Section 5 of the AHA. It will not be impacted by the Jandakot Airport Master Plan.

Figure 3: Project Map and Aboriginal Sites



8 CONCLUSIONS

AIC makes the following conclusions:

1. No new ethnographic or archaeological sites were identified. However,
2. JAH would benefit from the implementation of a Cultural Heritage Management Plan to ensure that it's Master Plan and future development complies with the AHA.
3. There is potential for intact archaeological deposits which may contain cultural material in undisturbed areas of the Jandakot Airport PDA. Monitoring of ground disturbing activities will be recommended.
4. Previously recorded sites; DIA 4309 Princep Road, DIA 4310 Kelso Road and DIA 4311 Acourt Road, are no longer sites within the meaning of Section 5 of the AHA and AIC will submit site updates to DIA.
5. DIA 3513 Lukin Swamp could not be identified within the Jandakot Airport PDA.
6. At this time a Section 18 application is not required for the Jandakot Airport Master Plan to proceed.

9 RECOMMENDATIONS

AIC makes the following recommendations:

1. Jandakot Airport Holdings continue with its Jandakot Airport Master Plan.
2. Jandakot Airport Holdings implements a Cultural Heritage Management Plan for the Jandakot Airport Master Plan. The implementation of a Cultural Heritage Management Plan will ensure that JAH conducts its developments in a manner that complies with the *Aboriginal Heritage Act (1972)* and other statutory requirements in relation to areas of Aboriginal cultural significance.
3. Jandakot Airport Holdings engage Aboriginal representatives as monitors during ground disturbing activities in previously identified Aboriginal sites areas of the Jandakot Airport PDA.
4. Jandakot Airport Holdings continues to consult with Aboriginal people during the development process if its Master Plan impacts on Aboriginal cultural heritage.
5. Jandakot Airport Holdings consider all the concerns and requests raised by the Aboriginal people.
6. All Jandakot Airport Holdings staff and contacting personnel are made fully aware of their obligations under the *Aboriginal Heritage Act (1972)*. To facilitate this it is recommended that a copy of the Act is available on site for reference at all times.

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APPENDIX 1: ROBERT BROPHO'S STATEMENT

Jandacot-runway10.9.08

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ON JANDACOT BUSHLAND

10 September, 2008

Most of the Banksia Bushland under threat has got to be saved.

We are using too much bushland.

What can be saved, save it. It is Camping Ground for Nyungah beanstick cutters, and their People, their Ancestors before them.

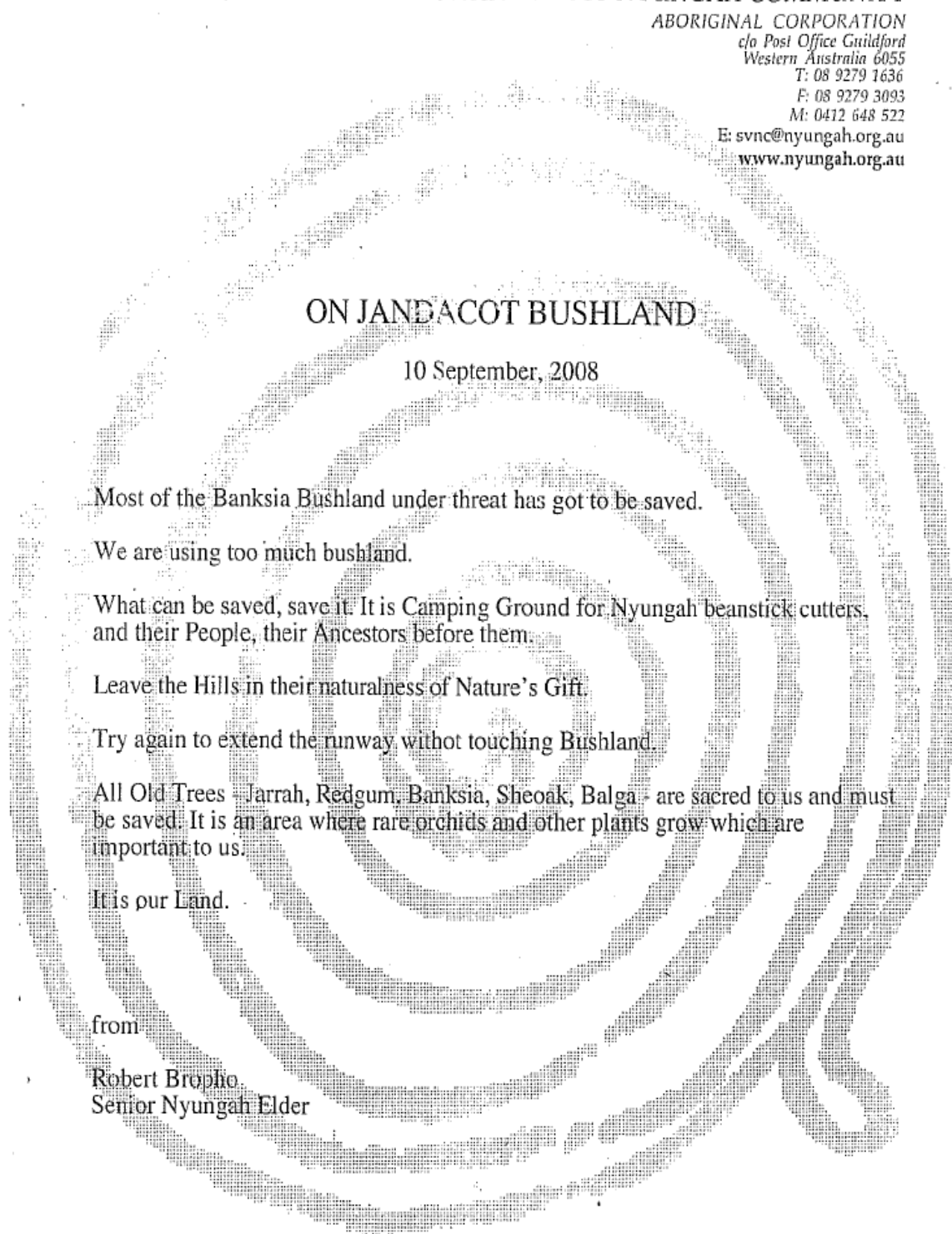
Leave the Hills in their naturalness of Nature's Gift.

Try again to extend the runway without touching Bushland.

All Old Trees - Jarrah, Redgum, Banksia, Sheoak, Balga - are sacred to us and must be saved. It is an area where rare orchids and other plants grow which are important to us.

It is our Land.

from
Robert Bropho
Senior Nyungah Elder



To look at the land through Nyungar eyes is to perceive personhood in all life forms.

Old trees are parents and seedlings are children. Birds and animals, particularly when one of them behaves in an unusual manner or is distinguished in some way (by uncommon size or colouring) may be a deceased ancestor. The land is seen as a huge body – most often it is recognized as the body of one's mother. To put a trench through the ground is to scarify the mother's back or dig into her guts.

This recognition of all living things as subjects, that is, as sentient and cognisant beings or persons, is one of the crucial premises of the Nyungar commentary on and reaction to white excavation, clearing or 'landscaping' of the land. From a Nyungar perspective, the essential relationship of generation and regeneration is seen to be shared in all living things. The lives of animals and plants participate in the same life processes as people.

In the same way that Nyungar families are aware of the presence of other people around them organised in families, they perceive other forms of life as organised in terms of kinship. The place where the green frog or the sergeant ant, the kangaroos or a particular plant lives is, for that being, a home. Walking along the Bennett Brook one day with Robert Bropho we came to some ant hills. He pointed out that this was 'bull ant and sergeant ant area all through here'. Asked the significance of his comment, he continued,

"He goes along on the side of us Aboriginal people, along with the association of the land, they move alongside of us. This is the home of the green frogs, kangaroos...living in harmony with us. Rain, sun, everything sharing."

It is this perception of sharing the life-world with other forms of expression of life, that belong to the country in the same way that people belong to a place, which is basic to Nyungar thinking about acts of desecration. Nyungar people see the ecological consequences of any intervention as the endangering or destruction – the murdering- of personalised forms.

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APPENDIX 2: CULTURAL MATERIAL CONTINGENCY PLAN

