



**REPORT OF AN ABORIGINAL HERITAGE  
SURVEY OF THE PERTH SEAWATER  
DESALINATION PLANT IWSS STAGE 2  
EXPANSION: KWINANA, WESTERN  
AUSTRALIA**

*A report prepared for Water Corporation*

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## ACKNOWLEDGEMENTS

The authors would like to thank the following organisations and individuals who helped with the management of this Aboriginal heritage survey:

- Ms Vanessa Kickett – Water Corporation (Team Leader Aboriginal Affairs / Aboriginal Affairs Section)
- Ms Bree Atkinson – Water Corporation (Environmental Approvals / Safety Environment & Aboriginal Affairs)
- Mr Peter McCleery – Water Corporation (Senior Project Manager Assets Delivery)
- Mr Matthew Casey – South West Aboriginal Land and Sea Council (Legal Officer)
- Mr Henry Thomason – Department of Planning, Lands and Heritage (Heritage Support Officer / Heritage Operations)
- Ms Louise Huxtable – Brad Goode & Associates Pty Ltd (Consulting Anthropologist)
- Mrs Leah Mackie – Brad Goode & Associates Pty Ltd (Research & Mapping Assistant)

### **Gnaala Karla Booja WC1998/058 Native Title Claim group representatives**

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| • Mr Olman Walley   | • Mr James Kearing         |
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| • Ms Louise Hansen  | • Mr Travis (Jock) Abraham |

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## MAPPING

Datum Used: GDA 1994 MGA Zone 50. Handheld GPS Unit Garmin 64ST (+/- 10m)

## GLOSSARY OF TERMS

The Proponent – Water Corporation  
The Consultant – Brad Goode & Associates Pty Ltd  
ACMC – Aboriginal Cultural Material Committee  
AHA – Western Australian *Aboriginal Heritage Act 1972*  
AHIS – Aboriginal Heritage Inquiry System  
BGA – Brad Goode & Associates Pty Ltd  
BP – Before Present  
CHMP – Cultural Heritage Management Plan  
DAA – *former* Department of Aboriginal Affairs  
DPLH – Department of Planning, Lands and Heritage  
GKB – Gnaala Karla Booja  
HIS – Heritage Information Submission  
IWSS – Integrated Water Supply Scheme  
NSHA – Noongar Standard Heritage Agreement  
NTC – Native Title Claim  
PSDP – Perth Seawater Desalination Plant  
SWALSC – South West Aboriginal Land and Sea Council

## EXECUTIVE SUMMARY

Water Corporation ('the proponent') is proposing to expand the Perth Seawater Desalination Plant as part of the Integrated Water Supply Scheme (IWSS) in Kwinana, Western Australia.

Specifically the project will construct a 25GL seawater desalination plant, supply and install intake and outfall pipes and conduct minor improvements to the Nicholson Road Pump Station.

The project area is located adjacent to and south of the current Seawater Desalination Plant on Barter Road, on Lot 1864 (PIN 292041), Lot 3 (PIN 12278354) and portions of Lot 54 (PIN 292042) and Lot 255 (PIN 12143593) within the Kwinana Beach Industrial Estate (see maps in figures 1 and 2 and Appendix 3).

The project area subject to Aboriginal Heritage Survey is an irregular shaped north/south polygon of 19.5 hectares bounded by the ocean to the west, Riseley Road to the south and east and Barter Road to the north. Also considered is a strip along the ocean foreshore that is 364m north/south and 34m east/west to the north of Barter Road in front of the current PSPD. A highly altered lot (Lot 3) that is rectangular and measures 282m east/west and 150m north/south east of Riseley Road is also considered in the survey.

Prior to commencing Water Corporation wishes to determine if there are any sites or places of Aboriginal heritage significance as defined by Section 5 of the Western Australia *Aboriginal Heritage Act 1972* (AHA) that will be affected by the proposed expansion, thereby fulfilling their obligations under the AHA.

A search of the Aboriginal Sites and Places Register was conducted on 11<sup>th</sup> January 2018 for the survey area which revealed that there are **no** previously recorded registered Aboriginal sites located in the PSDP project area.

One previously recorded Other Heritage Place ID 3776 Indian Ocean has a DPLH extent that overlaps a small portion of the project area that extends into the Cockburn Sound. However, Place ID 3776 has been assessed by the ACMC as not meeting the definition of an Aboriginal site under Section 5 of the AHA. As such, Water Corporation has no further obligations in relation to this 'Stored Data' heritage place.

A review of previous surveys conducted in the vicinity of the project area has revealed the significance that Nyungar people attribute to the Cockburn Sound and the reported creation mythology associated with Rottnest Island, Garden Island and Carnac Island (Brown 1983: 16, Fisher 2005: 13). The reported myths involve a Waugal (Armstrong 1836: 790) and a great fire that burned with intensity (Moore 1884: 6-8) that resulted in the ground splitting and offshore islands separating from the mainland. Another myth relates the story of a battle between a Waugal (rainbow sea serpent) and an Ancestral Crocodile that resulted in the spirit of the crocodile remaining at Garden Island (Landscape Magazine 2003).

Traditional Owners consulted previously by Fisher in 2005 and 2009 have advised that Place ID 3776 Indian Ocean is significant to Nyungar people in connection with these reported myths and it is their belief that this heritage place should be accorded protection under the AHA (see Fisher 2005: 2, Fisher & Dortch 2008: 51). However, Place ID 3776 remains classified as 'stored data' and no further information has been recorded that would lead it to be re-assessed as a site under Section 5 of the AHA.

As a result of consultations held with 8 representatives of the Gnaala Karla Booja WC1998/058 NTC group on the 24<sup>th</sup> January 2018, **no new** ethnographic sites of significance, as defined by Section 5 of the AHA, were identified within the proposed Perth Seawater Desalination Plant expansion area.

The Traditional Owners supported the proposed expansion of the Perth Seawater Desalination Plant to provide water to the growing population of the Perth Metropolitan area.

The Traditional Owners were not aware of any ethnographic sites located within the survey area, and advised that the project area would likely have been utilised by Nyungar people from inland areas for more customary cultural practices, such as camping and fishing, especially during the summer months.

As a result of the ethnographic survey the following recommendations in relation to the *Aboriginal Heritage Act 1972* are made:

**It is recommended** that the Water Corporation can proceed with their plans to expand the Perth Seawater Desalination Plant on Lot 1864 (PIN 292041), Lot 3 (PIN 12278354) and portions of Lot 54 (PIN 292042) and Lot 255 (PIN 12143593) without risk of breaching Section 17 of the AHA in relation to ethnographic Aboriginal Heritage Sites as defined by Section 5 of the AHA.

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## **REPORT**

### **Report of an Aboriginal Heritage Survey of the Perth Seawater Desalination Plant IWSS Stage 2 Expansion: Kwinana, Western Australia**

## **ISSUE**

Water Corporation ('the proponent') is proposing to expand the Perth Seawater Desalination Plant as part of the Integrated Water Supply Scheme (IWSS) in Kwinana, Western Australia.

The proponent wishes to determine if there are any sites or places of Aboriginal heritage significance as defined by Section 5 of the Western Australian *Aboriginal Heritage Act 1972* (AHA) that will be affected by this proposed work thereby fulfilling their obligations under the AHA.

## **REPORT OBJECTIVES**

To report on archival research in order to determine if any previously recorded Aboriginal Heritage sites or places will be affected by the above project proposal.

To report on consultations held with representatives of the Gnaala Karla Booja (GKB) WC1998/058 Native Title Claim (NTC) group in order to determine if any new Aboriginal Heritage sites or places will be affected by the above project proposal.

To report upon management recommendations should any sites or places of significance as defined by Section 5 of the AHA be identified to be located within the project area.

To report upon any recommendations and/or the significance of the sites or places should the proponent be required to make application under Section 18 of the AHA for consent to use the land that may contain an Aboriginal site.

## **BACKGROUND**

On 30<sup>th</sup> November 2017, Ms Vanessa Kickett (Water Corporation Team Leader Aboriginal Affairs) commissioned Brad Goode & Associates (BGA) to conduct an Aboriginal Heritage survey of the Perth Seawater Desalination Plant Expansion proposed in Kwinana, Western Australia.

Specifically the project will involve:

- Construction of a 25 GL seawater desalination plant;
- Supply and install intake and outfall pipes; and
- Conduct minor improvements to the Nicholson Road Pump Station.

The project area is located adjacent to and south of the current Seawater Desalination Plant on Barter Road within the Kwinana Beach Industrial Estate (see maps in figures 1 and 2).

The project area subject to Aboriginal Heritage Survey is an irregular shaped north/south polygon of 19.5 hectares bounded by the ocean to the west, Riseley Road to the south and east and Barter Road to the north. Also considered is a strip along the ocean foreshore that is 364m north/south and 34m east/west to the north of Barter Road in front of the current PSPD. A highly altered lot that is rectangular and measures 282m east/west and 150m north/south east of Riseley Road is also considered in the survey.

As a result of the above scope of works BGA Anthropologists, Mr Brad Goode and Ms Louise Huxtable, conducted an ethnographic survey with eight representatives from the Gnaala Karla Booja WC1998/058 Native Title Claim group on the 24<sup>th</sup> January 2018.

BGA Archaeologist Ms Jacqueline Harris conducted an archaeological investigation on the same day.

The results of each of these surveys are documented below.

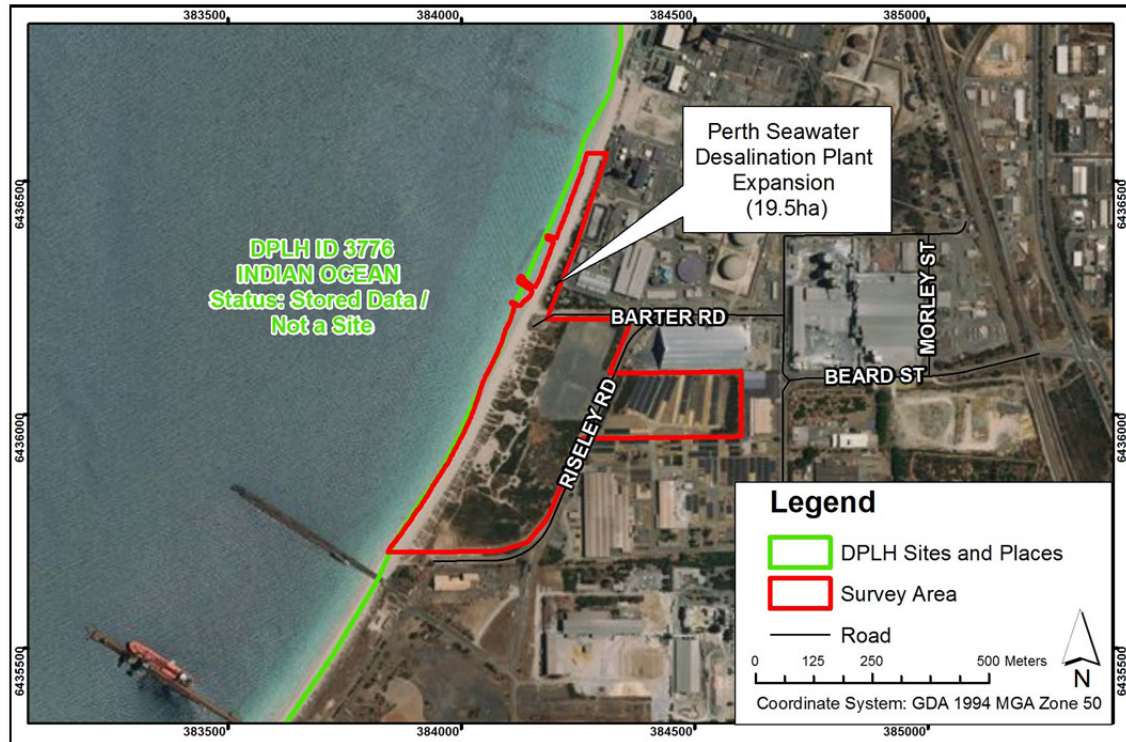


Figure 1: Aerial map of the Perth Seawater Desalination Plant Expansion survey area.

## LOCATION



Figure 2: Location of the survey area.

## ETHNOGRAPHIC & HISTORICAL BACKGROUND

### TRADITIONAL NYUNGAR CULTURE

The Perth Seawater Desalination Plant project area is located in Kwinana, on the west coast of Western Australia approximately 38 kilometres south of Perth. The survey area is within the Gnaala Karla Booja WC1998/058 Native Title Claim (NTC) boundary, approximately 4.5km to the south of the Whadjuk WC2011/009 NTC. Within these NTC boundaries there were a number of language divisions that were recorded by Bates (1985) and Tindale (1974).

Prior to European settlement of the south west of Western Australia this region was occupied by a distinct cultural bloc that was defined by the distribution of 'Nyungar' language groups. The word 'Nyungar' is the generic term used today to define those people of Aboriginal descent whose ancestors occupied the whole of the south-western corner of Western Australia (Bates 1985: 47, Collard 1994: 23).

Before the word 'Nyungar' was used as a group or linguistic term the southwest Aboriginal people recognized themselves, their language and culture, as 'Bibbulmun.' According to Bates (1985) Bibbulmun land took in everything to the west of a line drawn from Jurien Bay on the west coast to east of Esperance on the south coast, with the inland boundary following that of the circumcised tribes (Bates 1966: 59). The Bibbulmun were further distinguished by the type of country that they occupied (Bates 1985: 46-54):

All coastal Bibbulmun were Waddarn-di – sea people, and called them and were called by their inland neighbours, Waddarn-di Bibbulmun. The inland tribes were distinguished by the character of the country they occupied. They were either Bilgur (river people, *beel* or *bil*-river), Darbalung (estuary people), or Buyun-gur (hill people – *buya*-rock, stone, hill), but all were Bibbulmun... Yabbaru Bibbulmun-Perth and Gingin district tribes were so called from their dialectic term for north – *yabbaru* (Bates 1985: 47).

Bates identified the sub-group of Bibbulmun in the Perth Fremantle region as the Yabbaru Bibbulmun (Bates 1985: 54). Their country comprised of Perth, Fremantle and Rockingham and was "bounded on the south by the Serpentine River, the hills forming their eastern boundary" (ibid: 49). The Nyungar or Bibbulmun people were a distinct group in that their initiation practices varied markedly from their desert and semi-desert dwelling neighbours. Bates records that the Bibbulmun did not practice circumcision or sub-incision, but rather practiced a ritual of nasal septum piercing and cicatrization of the upper body (ibid: 151-162).

Tindale (1974) noted that the coastal area in the vicinity of Cockburn Sound was inhabited by the 'Whadjuk' to the north and the 'Pindjarup' to the south. The Whadjuk group inhabited the lands of the north and eastern tributary inland to Mt Helena at Kalamunda/Armadale to the Victoria Plains south of Toodyay, west to York and south along the coast to Pinjarra (Tindale 1974:260). The Pindjarup group inhabited the lands from Bunbury in the south, south-east to Boyanup, north-east to Collie, north to Mt Cooke and west to Rockingham (ibid: 256)

Traditional initiation practices varied from those of their inland neighbours. The Bibbulmun Nyungars practiced nasal septum piercing and cicatrization (scarring) of the upper body rather than circumcision as an initiation rite (Bates 1985; Tindale 1974).

The Bibbulmun Nyungar people recognized two primary moieties, the Manichmat or 'fair people of the white cockatoo' and the Wordungmat or 'dark people of the crow'. These formed the basis for marriage between a further four class subdivisions, the Tondarup, Didarruk and Ballaruk, and Nagarnook. Bates describes the only lawful marriage to be "the cross-cousin marriage of paternal aunts' children to the maternal uncle's children", and states that the four

clan groups and relationships, under different names, are “identical in every tribe in Western Australia, east, north, south and south west” (Bates 1966: 24-25).

Berndt (1999) noted that most relationships in Aboriginal societies were expressed in kin terms and that a network of obligations and responsibilities linked people and provided an atmosphere of familiarity and intimacy within the group. This social organisation and structure was analysed thus by Berndt:

In Aboriginal Australia kinship is the articulating force for all social interaction. The kinship system of a particular tribe or language unit is in effect a shorthand statement about the network of interpersonal relations within that unit - a blueprint to guide its members. It does not reflect, except in ideal terms, the actuality of that situation; but it does provide a code of action which those members cannot ignore if they are to live in relative harmony with one another. And kinship, in this situation, pervades all aspects of social living. We cannot understand or appreciate traditional life in Aboriginal Australia without knowing something, at least, of its social organisation and structure - of which kinship is the major integrating element, or, to put it another way, the fine mesh which holds the society together (Berndt & Berndt 1999: 90).

While Bates saw the Bibbulmun people as being different to other Aboriginal peoples and as representing a distinctive group and even a ‘nation’, more recent anthropologists have emphasized the sameness of all Australian Aboriginal groups and are critical of Bates’ notion of language based ownership of land.

But although there is so much variation in these rituals, the majority contain some common themes; in simplest terms, removal from the main camp and total or partial enforced segregation; performance of some rite to emphasize the fact of transition; revelation of secrets of a religious nature; and finally, return to the main camp as a social adult (Berndt & Berndt 1999: 180).

Nyungar people traditionally obeyed a recognized system of rights and obligations, transmitted through birth and marriage, which gave individuals rights to the use of and economic benefits of the land over which they also acted as custodians. These areas were significant because they were associated with mythic figures relating to the Aboriginal concept of Dreaming (Silberbauer 1994: 124; Stanner 1965: 13). The Dreaming refers to a period of creation when mythical figures transformed the landscape creating hills, lakes, rivers and animals (Machin 1996: 10).

The Waugal is one example of a Dream-time figure which has transformed the landscape as well as infusing it with a living spirit. The Waugal is a creative spirit associated with water and which takes the physical shape of a snake. Bates (1985: 221) reported that the Waugal made “all the big rivers of the Southwest and that wherever it travelled it made a river.” Bates also noted that everywhere the Waugal went or camped was sacred (Bates 1985: 219). It was at these places that it left traces of its journeys, that it metamorphosed and left parts of itself which were transformed into topographic features and other natural features, including hills, rocks, trees, caves, sand dunes, ridges etc. The Waugal is associated with many of the major rivers in the Darling Range as well as many of the smaller springs, swamps, pools and lakes located on the Swan Coastal Plain (O’Connor, et al 1989: 46).

Each socio-linguistic group, sometimes referred to as the ‘tribe’, consisted of a number of smaller groups. Each of these smaller groups was made up of around 12 to 30 persons, related men, their wives and children, and at times, visiting relatives from other groups. These subgroups could be described as a family, a band or a horde (Green 1984: 9). For every subgroup there was a tract of land with which they most closely identified themselves with. An individual or a group’s land was called their *Kalla*, or ‘fireplace’ (Moore 1884: 39). This referred to an area of land which was used by the group and over which the members of the

group exercised the greatest rights to its resources. Other groups would also have some rights of access to land and use gained through marriage (Le Souef 1993: 30-43).

Ownership rights to land were held by groups of people linked through common descent; there was definite ownership of land in both social and personal ways. As well as belonging to a local descent group by birth, each individual simultaneously belonged to an economic or food gathering group (Le Souef 1993: 30).

According to Makin (1970) and Brown (1983) early writers such as Symmons (1840), Lyon (1833) and Armstrong (1836) recorded that the Swan River Aboriginals had a system of land ownership that divided up the country around the river between local clan groups.

Lyon described districts within Perth in terms of an area name and a single leader. The *Mooro* tribe occupied the district of *Yellowgonga*, *Beeloo* was the district of *Munday* and *Beelias* was the district of *Midgegooroo* (see Lyon's 1833 map of Aboriginal Tribal Districts surrounding Perth cited in Brown 1983: 6). Armstrong also recognized that land appeared to be assigned to specific families, rather than being held in common by the wider 'tribe' (Brown 1983: 5).

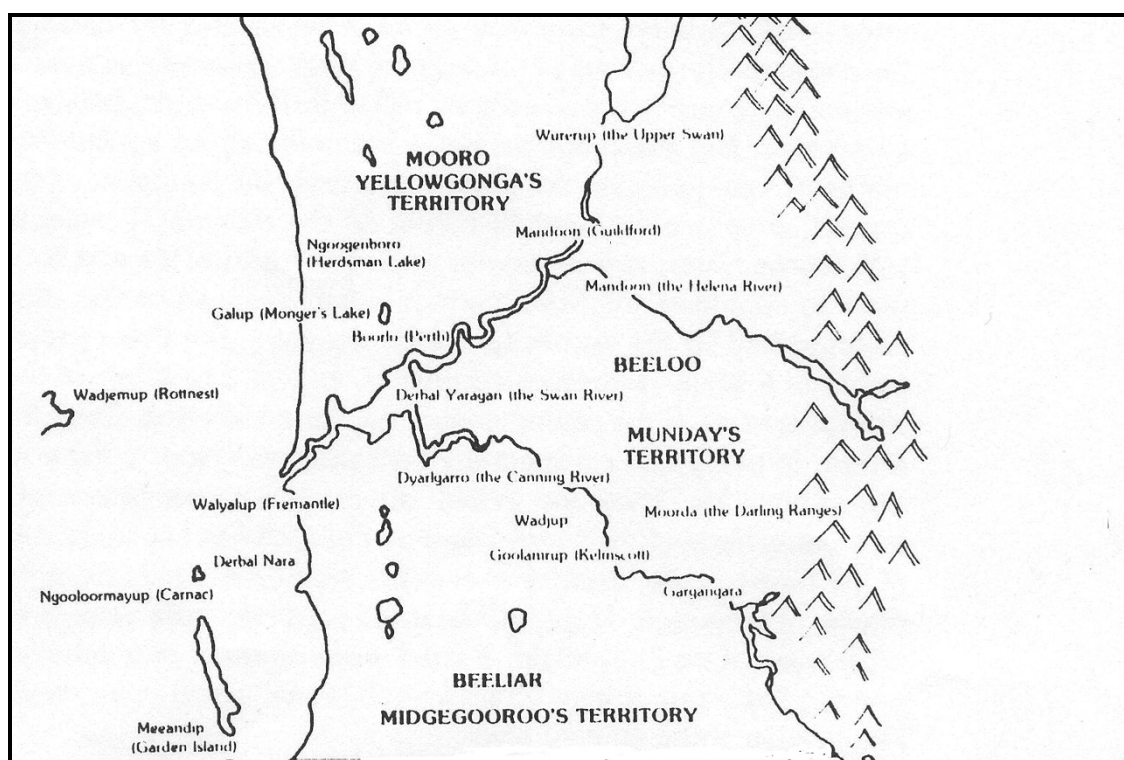


Figure 3: Place names and territories as told to Robert Lyon by Yagan in 1832 (cited in Green 1984: 50)

Makin (1970) recorded that from Fremantle (Wol-ya-lu) up the river to Butlers Bay (Bi-ri-gap) and to Mt Eliza (Ga-ra-katta) was the 'Land of Yal-gong-ga', his sons, wives and children (Makin 1970: 72-74). From Mt Eliza past the flats (Min-da-rop) near the Narrows Bridge to the Peninsula (Wu-rut) north of the farm belonging to Colonial Secretary Mr Brown at Bassendean was the land of 'Monday' (or Munday) (ibid). From the Bassendean ferry jetty to the head of the Swan River was the land of Ngu-nyt. The Canning tribes occupied the left (south) bank of the Swan River and the adjacent Canning River. The land from Fremantle to Preston Point and Point Walter around to Butlers Bay, the entrance to the Canning River, was Djar, Gar-bal, Yurjil and Nin-g-ara (ibid). From the entrance of the Canning River past Mill Point to near Guildford was Bi-nan, Yur-gan. From Guildford to the Swan River head were Mol-li-dobbin, Mol-li-migrat and Wiban and other branches of the family (ibid).

For the Rockingham area, specifically from a line drawn due east from Mangles Bay, extending northwards to the foreshores of the Swan and Canning Rivers was the 'territory' of the Beeliar Aboriginal group. This group included the Aboriginal influential Midgegooroo and his son, *Yagan*. The wetlands in this region were most intensively occupied, given the availability of fresh water and food resources (waterfowl, turtles, kangaroos). Wells were dug close to swamps in order to filter water and some swamp vegetation was consumed. Spears were made from 'spear wood' and comprised an important trade item. Pads connected the wetlands and rivers and extended through this territory from the present day Perth area south to Rockingham, Mandurah and the Murray River (Ralph, Locke and Smith 1990: 8).

With regards to the Rockingham area various researches such as Machin (1989) and McDonald (2002, 2004) have recorded myths that relate to the creation of Cockburn Sound and the offshore islands Rottnest, Garden Island, Carnac Island and the area of the coast around Mangles Bay, what is now Rotary Park and the adjacent wetlands. These myths were recorded by the above researchers as told by Mr K. Colbung, the primary informant of this creation story.

These stories had also formerly been recorded in the early 19<sup>th</sup> century by Moore (1884) and Armstrong (1836) who reported different versions of the same myth. Moore (1884, cited in Brown 1983: 16) records that a great fire was responsible for the creation of the offshore islands:

The natives have a tradition that Rottnest, Carnac and Garden Island once formed part of the mainland, and that the intervening ground was thickly covered with trees; which took fire in some unaccountable way, and burned with such intensity that the ground split asunder with great noise, and the sea rushed in between cutting off the islands from the mainland (Moore 1884: 6-8 cited in Brown 1983: 16).

Armstrong (1836: 790) version of the story was recorded as:

They state, as a fact handed down to them from their ancestors, that Garden Island was formerly united to the main, and that the separation was caused, in some preternatural manner, by the Waugal (Armstrong 1836: 790).

These versions of the story also substantially differ from that recorded by the above researchers by Mr K. Colbung whose central figure was a crocodile, not a Waugal. McDonald (2002) explains that if the crocodile in Mr Colbung's version is read as a Waugal then there is a clear consistency with Mr Colbung's version of the myth and as recorded by Armstrong. McDonald (2002) has suggested that the inconsistency of the above narratives can be considered anthropologically as a natural part of all myth systems and as noted by Miranda (1972:8 cited in McDonald 2002) myths often consist of a reorganising of the traditional components in the face of new circumstances and times. McDonald (2002) argues that this is what is happening with the above myth as told by Mr Colbung. McDonald (2002) argues that this is a legitimate part of contemporary Aboriginal people reinterpreting traditional mythological stories by incorporating contemporary and modern beliefs into the versions now being told (McDonald 2002: 8).

## ARCHIVAL RESEARCH

Archival research involved an examination of the Department of Planning, Lands and Heritage (DPLH) Sites and Places Register, a review of any relevant site and place files, and a review of any unpublished ethnographic reports that relate to the Kwinana survey area, Western Australia.

### SITES AND PLACES REGISTER SEARCH

The DPLH Aboriginal Sites and Places Register categorises places reported to be of importance and significance to Indigenous people into two separate categories.

The first category contains sites classified as **‘Registered.’** Registered sites have been assessed by the Aboriginal Cultural Materials Committee (ACMC) as meeting the definition of Section 5 of the AHA and are fully protected under the law. Disturbance to land that contains such sites requires a Section 18 application for ministerial consent should proponents wish to use the land that contain these sites.

**‘Other Heritage Places’** is the second category of places contained upon the Aboriginal Sites and Places Register. These types of places include reported places **‘Lodged’** and awaiting ACMC assessment, and places where the information has been assessed but there is **‘Insufficient information’** to make a final determination under Section 5 of the AHA but there is enough information to warrant these places temporary protection in law. Disturbance to land that contains such places requires a Section 18 application for ministerial consent should proponents wish to use the land that contain these places.

Within the category of ‘Other Heritage Places’ the final category is **‘Stored Data.’** Such places have been assessed by the ACMC but fail to meet the definition of Section 5 of the AHA. Places in this category are not sites under the AHA and are not protected in law. Proponents have no further legal requirements for such places should they wish to use the land unless further information is reported which would lead to such a place being reassessed as a site in terms of the definition of Section 5 of the AHA.

In relation to this survey a search of the DPLH Aboriginal Heritage Sites and Places Register was conducted on **11<sup>th</sup> January 2018** for the PSDP survey area, comprising of Lot 1864 (PIN 292041), Lot 3 (PIN 12278354) and portions of Lot 54 (PIN 292042) and Lot 255 (PIN 12143593). The search revealed that there are **no** previously recorded registered Aboriginal sites located in the project area (see Appendix 1: Site Register Search).

One previously recorded Other Heritage Place ID 3776 Indian Ocean has a DPLH extent that overlaps a small portion of the project area that extends into the Cockburn Sound. However, Place ID 3776 has been assessed by the ACMC as not meeting the definition of an Aboriginal site under Section 5 of the AHA. As such the Water Corporation has **no further obligations** under the AHA in relation to this ‘Stored Data’ heritage place, Place ID 3776 Indian Ocean.

**Table 1: Summary of Aboriginal heritage sites and places within the project area.**

| ID                    | Name         | Status | Access | Restriction | Location<br>(GDA94 Z50)* |         | Type |
|-----------------------|--------------|--------|--------|-------------|--------------------------|---------|------|
|                       |              |        |        |             | mE                       | mN      |      |
| Other Heritage Places |              |        |        |             |                          |         |      |
| 3776                  | Indian Ocean | S      | O      | N           | 372624                   | 6445362 | Myth |

\* Please note: Coordinates are indicative locations that represent the centre of sites as shown on maps produced by the DPLH – they may not necessarily represent the true centre of all sites.

#### LEGEND

**R** – Registered Site, **I** – Insufficient Information, **S** – Stored Data/Not a Site, **L** – Lodged awaiting assessment,  
**O** – Access Open, **C** – Closed Access, **N** – File Not Restricted.

## REVIEW OF RELEVANT OTHER HERITAGE PLACE FILES

### **Place ID 3776 Indian Ocean**

This mythological heritage place was recorded on the DPLH Sites and Places Register as a result of an Aboriginal heritage survey report conducted by S.H. Brown in 1983. During this survey of proposed highway and road developments in the Perth Metropolitan region, Brown (1983) conducted ethnographic investigations of a number of Aboriginal sites in the region.

Place ID 3776 Indian Ocean was described as the “sea between mainland and offshore islands” (Brown 1983: 16) and Brown cited two Aboriginal myths that explain the separation of some of the offshore islands from the mainland.

They state, as a fact handed down to them from their ancestors, that Garden Island was formerly united to the main, and that the separation was caused, in some preternatural manner, by the Waugal (Armstrong 1836: 790).

The natives have a tradition that Rottnest, Carnac, and Garden Island, once formed part of the mainland, and that the intervening ground was thickly covered with trees; which took fire in some unaccountable way, and burned with such intensity that the ground split asunder with a great noise, and the sea rushed in between cutting off those islands from the mainland (Moore 1884: 6-8).

Further research has been added to the Heritage File which includes early historical information compiled in ‘Landscape WA’s Conservation, Parks and Wildlife Magazine’. In this article the Dreaming story as told by local Nyungar Mr Trevor Walley was published:

Gumbar Yondock Ancestral Crocodile travelled down from the north and pushed himself onto the land, where his tail cut a deep channel in Cockburn Sound (now known as Gage Roads) and pushed up Rottnest (Wadjemup). The sound of rushing water woke the rainbow sea serpent (Waugal). Waugal smelled the salt and went out to investigate. A battle between the two pushed up Carnac (Ngooloomayp) Island. At Woodman Point, the Waugal manoeuvred and carved out Jervois Bay with his tail. Waugal bit the tail of crocodile, who then gave up, Waugal heard the sea water come rushing into the Swan River (stirred up because of all the fighting) and anchored the severed tail across the entrance, using the hair from his chin and armpit and the crocodile’s toenails to anchor the tail down. This formed a reef across the Swan River mouth, and it was jagged like the tail of a crocodile (this reef once blocked the mouth of the Swan River at Fremantle, before it was removed to create Fremantle Harbour). Waugal then made crocodile walk back up north whilst his spirit remained as Garden Island. Hence, Garden Island is known as Meeandip Yondock (Yondock with tail missing). (Landscape Magazine 2003 cited in DPLH file for Place ID 3776).

This heritage place was spatially recorded by DPLH to capture the sea between the east coast of Rottnest Island to the mainland at Cottesloe and then extends south to take in Cockburn Sound and the east coast of Garden Island. The most southern point of this heritage place is the southern tip of Garden Island and then heads east to the mainland at Kwinana Beach.

The ACMC assessed this heritage place as not meeting the terms of Section 5 of the AHA and Place ID 3776 Indian Ocean was classified as ‘Stored Data / Not A Site’ (ACMC ID 13/98 Resolution No. 04082 Meeting held April 1998).

In relation to the Water Corporation survey area, Place ID 3776 extends along the western edge and overlaps a small portion of the expansion area to the northwest of Barter Road. However, as Place ID 3776 is not a site under the AHA, Water Corporation has no further obligations under the AHA in relation to this heritage place.

## REVIEW OF RELEVANT ETHNOGRAPHIC REPORTS

**O'Connor, R., Bodney, C. and Little, L. 1985**, *Preliminary Report on the Survey of Aboriginal Areas of Significance in the Perth Metropolitan and Murray River Regions*, report prepared for the Centre for Prehistory at the University of Western Australia on behalf of the Department of Aboriginal Sites at the Western Australian Museum, July 1985 [DPLH Report ID 102670].

In 1985 the Centre for Prehistory at the University of Western Australia, on behalf of the Department of Aboriginal Sites at the Western Australian Museum, commissioned O'Connor, Bodney and Little to carry out the ethnographic component of a project examining a number of Aboriginal sites in the Perth Metropolitan region (O'Connor et al. 1985: 1).

The survey area focused on the Perth Metropolitan region, bounded by the Yanchep National Park in the north, Gidjegannup in the east and Pinjarra in the south (O'Connor et al. 1985: 2).

During this survey, Site ID 3710 Thomas Oval in Medina was recorded as an Aboriginal camp site used by Aboriginal people in the 1920's. A portion of this camping area was noted to be an avoidance area where a resident had seen a 'native girl's spirit standing beside his campfire' (O'Connor, et al. 1985: 87). Another camping area was recorded in Medina, Place ID 3698 Chalk Hill Camping Area, which had been utilised in the 1950's and 1960's as an area by many families during relocation from farms in the Baldivis/Serpentine area to a new urban environment (O'Connor, et al. 1985: 88).

In relation to the current Water Corporation survey, the O'Connor, Bodney and Little (1985) survey area is located over the entirety of the Perth Seawater Desalination Plant Expansion project area. Site ID 3710 Thomas Oval and Place ID 3698 Chalk Hill Camping Area are located 3.5km and 3.9km respectively to the south-east of the current Water Corporation survey area.

**Fisher, S. 2005**, *Report on an ethnographic survey of the proposed Cockburn #3 Gas-Fired Power Station at Kwinana WA*, report prepared by Fisher Research Pty Ltd for NewGen Power Ltd, October 2005 [DPLH Survey Report ID 21919].

Fisher Research Pty Ltd conducted an ethnographic survey in October 2005 of a proposed gas-fired power station at Kwinana on behalf of NewGen Power Pty Ltd. The survey followed a Work Area Clearance model for 4 hectares of land in the Naval Base Industrial area at Kwinana, to the north of the Water Corporation Seawater Desalination Plant.

The survey area had undergone significant disturbance in the past for industrial purposes and there were no previously recorded Aboriginal sites located in the survey area.

One heritage Place ID 3776 Indian Ocean was located to the immediate west which had recently, at the time of the ethnographic survey (2005), been assessed by the ACMC as not meeting the definitions of an Aboriginal site under the AHA. However the Traditional Owners consulted insisted that Cockburn Sound and its coastal dune system is significant to Aboriginal people and should be protected under the provisions of the AHA (Fisher 2005: 2).

The Traditional Owners reported that Place ID 3776 Indian Ocean was significant to Nyungar people in connection with the Two Men Dreaming which explained the creation of the Carnac, Garden and Rottnest Islands (Fisher 2005: 13).

The Traditional Owners consulted during the ethnographic consultations expressed their opposition to other developments in the vicinity, such as the Perth Seawater Desalination Plant to the south, and the impact that the highly concentrated saline water discharge into Cockburn

Sound would have on Place ID 3776. As such, they expressed their opposition over the gas-fired power station proposal as they surmised that the power plant would facilitate the operation of the Perth Seawater Desalination Plant (Fisher 2005: 13).

Regarding the gas-fired power station proposal, Cockburn Sound and the coastal dunes immediately to the west of the survey were found to be impacted upon by the construction and operation of the submerged cooling water discharge pipes and diffusers.

Further consultations were conducted with the Traditional Owners as a follow-up to the concerns expressed initially which resulted in the group providing their support to the project. The Traditional Owners found that the proposal would not impact negatively on the seabed of Cockburn Sound and they were happy with the fair and constructive way that NewGen Power had responded to their concerns (Fisher 2005: 16-17).

As a result of the ethnographic survey, it was recommended that NewGen lodge an application under Section 18 of the AHA before any disturbance to the coastal dunes and Cockburn Sound occurs (ibid: 3).

In relation to the current Water Corporation survey area, Fisher's (2005) survey area is located adjacent to the north-eastern end of the project area, approximately 250m north of Barter Road.

**Goode, B. and Harris, J. 2006, *An Aboriginal Heritage Survey for the Proposed Perth Seawater Desalination Plant Two, Western Australia*, A report prepared for the Water Corporation, September 2006.**

This survey was conducted by Brad Goode & Associates on behalf of the Water Corporation whom were seeking approval for a proposed second seawater desalination plant in the Perth metro area. Two locations were being considered for approval, 'East Rockingham Site 1', 'East Rockingham Site 2'. It was determined that Site ID 22888 Mooribirdup Ceremonial Grounds, Site ID 15974 Lake Richmond and Site ID 352 Lake Richmond would all be affected by the Water Corporation's desalination PSDP2 outlet pipe.

With regards to Site ID 22888 Mooribirdup Ceremonial Grounds those consulted had no knowledge of this report and of the areas reported significance. Mr Robert Walley who is the site informant's father clearly stated that he had no knowledge of the areas reported significance. The entire group stated that they were happy for the outlet pipe to be installed in this area as per plan.

With regards to Site ID 15974 Lake Richmond, Mr Joe Walley stated that the areas on the south side of the Lake were the areas of significance. Mr Walley advised that the Water Corporation should install the outlet pipe along the northern margins of Lake Richmond, as originally planned and that the suggestion to move the pipe to the north side of Lake Street in order to remove the pipe from within the sites boundary was not a good idea because it would disturb the verges of private properties.

In regard to the current Water Corporation proposal, the Goode (2006) survey area considered a pipeline from Point Peron to two proposed plant locations on Mandurah Road in Rockingham, approximately 5.5km south of the current PSDP project area.

**Fisher, S. and Dortch, J. 2008, *Report on an Aboriginal heritage survey of the proposed Kwinana Quay, Town of Kwinana/City of Cockburn, WA*, report prepared by Fisher Research Pty Ltd for Fremantle Ports, July 2008 [DPLH Survey Report ID 23099].**

Fisher Research Pty Ltd conducted an Aboriginal Heritage survey in February and July 2008 of the proposed development of the Kwinana Quay by Fremantle Ports. The ethnographic

Aboriginal heritage survey was conducted by Stuart Fisher and Dirima Curthbert (anthropologists), and the archaeological survey was carried out by Joe Dortch (archaeologist).

Fremantle Ports proposed to develop the Kwinana Quay to provide an 'overflow' container and general cargo handling facilities to boost the capacity of the existing Fremantle Inner Harbour. The proposed works included constructing port options and bridge options to carry road and rail freight, upgrade of existing shipping channels, construction of ship berthing and turning areas, land reclamation and ongoing maintenance dredging (Fisher & Dortch 2008: 4).

A search of the Aboriginal Sites Register revealed that one Registered Site ID 20865 Mount Brown and one heritage Place ID 3776 Indian Ocean was located in the vicinity of the project area. Place ID 3776 had previously been determined by the ACMC as not a site under the AHA.

Consultation with the Traditional Owners determined that Site ID 20865 Mount Brown would not be impacted by the proposed works. Some of the Traditional Owners consulted stated that they opposed the proposed development on the grounds that it would likely disturb their spiritual Dreaming of Cockburn Sound associated with Place ID 3776 Indian Ocean, and others expressed their wish to have a business agreement set up as compensation. The remaining Traditional Owners provided their support to the project with the KQ Offshore development (Option 1) being the preferred option (Fisher & Dortch 2008: 7-9).

No archaeological sites were identified during the survey however the report noted the possibility of subsurface archaeological material located in the survey area, both on land and offshore. As a result it was recommended that an archaeological monitoring programme be adapted to the project area to include the offshore area (Fisher & Dortch 2008: 19).

In relation to the status of Place ID 3667 Indian Ocean as 'stored data', Traditional Owners from the Bropho family group advised that this heritage place should be reinstated as a registered site due to its "mythological connections and economic value as a traditional and historical food source and hunting place" (Fisher & Dortch 2008: 51). The consultant requested that any additional information regarding Cockburn Sound should be provided in writing which may lead it to be reinstated as a site. However, a footnote on page 43 of the report noted that no further information was provided by the Bropho family group (Fisher & Dortch 2008: 43).

In relation to the current Water Corporation survey area, Fisher & Dortch's (2008) survey overlays the entirety of the Perth Seawater Desalination Plant expansion area.

## OUTCOMES OF ARCHIVAL RESEARCH

A search of the Aboriginal Sites and Places Register was conducted on 11<sup>th</sup> January 2018 for the PSDP survey area comprising of Lot 1864 (PIN 292041), Lot 3 (PIN 12278354) and portions of Lot 54 (PIN 292042) and Lot 255 (PIN 12143593). The search revealed that there are **no** previously recorded registered Aboriginal sites located in the project area.

One previously recorded Other Heritage Place ID 3776 Indian Ocean has a DPLH extent that overlaps a small portion of the project area that extends into the Cockburn Sound. However, Place ID 3776 has been assessed by the ACMC as not meeting the definition of an Aboriginal site under Section 5 of the AHA. As such, Water Corporation has **no further obligations** in relation to this 'Stored Data' heritage place.

A review of previous surveys conducted in the vicinity of the project area has revealed the significance that Nyungar people attribute to the Cockburn Sound and the reported creation mythology associated with Rottnest Island, Garden Island and Carnac Island (Brown 1983: 16, Fisher 2005: 13). The reported myths involve a Waugal (Armstrong 1836: 790) and a great fire that burned with intensity (Moore 1884: 6-8) that resulted in the ground splitting and offshore

islands separating from the mainland. Another myth relates the story of a battle between a Waugal (rainbow sea serpent) and an Ancestral Crocodile that resulted in the spirit of the crocodile remaining at Garden Island (Landscape Magazine 2003).

Traditional Owners consulted previously by Fisher in 2005 and 2009 have advised that Place ID 3776 Indian Ocean is significant to Nyungar people in connection with these reported myths and it is their belief that this heritage place should be accorded protection under the AHA (see Fisher 2005: 2, Fisher & Dortch 2008: 51). However, Place ID 3776 remains classified as 'stored data' and no further information has been recorded that would lead it to be re-assessed as a site under Section 5 of the AHA.

## IDENTIFICATION OF SPOKESPEOPLE

### THE RIGHT TO SPEAK ON HERITAGE ISSUES

Various authors have discussed the contemporary problem of who in the Indigenous community has the authority to speak on heritage issues within an area. O'Connor et al (1989: 51) suggests that when this question is posed to people in Indigenous Australia, answers are usually framed by such terms as 'the Traditional Owners', i.e., those people who are defined by place of birth, or descent. Myers (1986) presents a broader and more contemporary view of 'ownership' based upon descent and association,

An estate, commonly a sacred site, has a number of individuals who may identify with and control it. They constitute a group solely in relationship to this estate... Identification refers to a whole set of relationships a person can claim or assert between him/herself and a place. Because of this multiplicity of claims, land holding groups take essentially the form of bilateral, descending kindred. Membership as a recognised owner is widely extended and therefore groups are not a given (Myers 1986: 128).

Myers (1986) further clarifies the current perception of 'ownership' when he states,

....such rights exist only when they are accepted by others. The movement of the political process follows a graduated series of links or claims of increasing substantiality, from mere identification and residual interest in a place to actual control of its sacred association. The possession of such rights as recognised by others, called 'holding' (*kanyininpa*) a country, is the product of negotiation (Myers 1986: 128-129).

While the notion of descent is clearly an important criterion within Myers analysis, it must be seen in terms of the contemporary Nyungar situation. Nyungar tradition in the South West has been seriously eroded since colonisation as lines of descent have been broken and previously forbidden and mixed marriages have interconnected many Nyungar groups who would not have traditionally had a close association (Machin 1993: 20). Consequently, in contemporary times the criteria of historical 'association' may in some cases also be regarded as a 'right to speak' on heritage issues within an area. Machin (1995) elaborates,

Traditional subsistence no longer sufficed to support Aboriginals so they combined this with menial work on farms and over time new relationships to land developed. As a consequence, the more recent history associated with their involvement with European agriculture and labour patterns is often more relevant than the pre-contact mode of attachment to an old way of life and the roots of the identity as original owners of the land. Biographical associations are often tied to post-settlement labour patterns and identification. These can predominate. This is part of a dynamic process of ethnicity, identity and tradition (Machin 1995: 11).

O'Connor et al. (1989) identified several criteria for determining contemporary community spokespeople. A spokesperson must have a long-term association with an area, usually as a young person, and had extensive contact with a member or members of the 'pivotal generation of the culture transmitters'; those people whom, as children themselves, had contact with people who could pass on their traditional knowledge. A spokesperson must also demonstrate knowledge of the region's natural resources, its hunting, fishing and camping grounds, local water sources and flora and fauna. This is important because a person without this knowledge is unlikely to be seen by their fellow Nyungar people as truly being from that country, despite having been born or lived in that area. In some cases, people from outside a specific region have established themselves by political activism. They are accepted by their fellow Nyungars because they may have participated in mainstream pursuits, such as advanced education or legal and political careers, which have empowered them within the broader community. As such, these people are a valuable resource to the local Indigenous community. The people consulted in this survey fulfil at least one of these criteria.

## NATIVE TITLE CLAIMS OVER THE SURVEY AREA

Currently lodged with the Register of Native Title Claims and the Schedule of Applications, held by the Commonwealth Native Title Tribunal, there is one registered Native Title application that overlays the project area. The Schedule of Applications includes registered applications, unregistered applications and applications still undergoing the registration test.

- **Gnaala Karla Booja WC1998/058 WAD6274/98 (Registered)**

Applicants: Mr D. Smith, Mr F. Nannup, Mr H. Narkle, Mr J. Northover, Mr J. Walley, Mr M. Abraham, Mr P. Michael, Ms B. Corbett-Stammner and Ms L. Bellotti.

## SELECTION OF SPOKESPEOPLE FOR THIS SURVEY

As the representative body under the *Native Title Act 1993* for the registered Gnaala Karla Booja WC1998/058 Native Title Claim group, the South West Aboriginal Land & Sea Council (SWALSC) was engaged by the Water Corporation to select representatives to be consulted with in relation to the Perth Seawater Desalination Plant Expansion project.

In line with the terms of the Noongar Standard Heritage Agreement (NSHA), Mr Peter Nettleton (Senior Legal Officer) from SWALSC provided Ms Vanessa Kickett (Team Leader Aboriginal Affairs) from the Water Corporation with a list of nominated survey participants on 15<sup>th</sup> November 2017.

As a result of this pre-consultation selection process, the following 8 representatives attended the ethnographic survey on the 24<sup>th</sup> January 2018:

**Mrs Gloria Bennell** was born in York to parents Mr Thomas Lawrence, from new Norcia and Ms Mary Blurton (nee Tirban) from Katanning. Mrs Bennell's paternal grandparents are Ms Susan Indich, from Perth, and Mr Lorenzo Ponton, who was born at Thomas River in Esperance. Mrs Bennell's maternal grandparents are Mr Matthew Blurton, from Quairading, and Ms Philomena Gibbs, from Katanning. Mrs Bennell was nominated by SWALSC to participate in this survey.

**Mr Olman Walley** was born to parents Mr Richard Walley, who was born in Meekatharra, and Ms Geraldine Hayden, born in Beverley. Mr Walley's grandparents on his father's side of the family are Mr Richard Walley and Ms Violet Winmar. Mr Walley's grandparents on his mother's side of the family are Mr Aubrey Hayden and Mrs Janet Hayden. Mr Walley is a member of the Gnaala Karla Booja NTC group and was nominated by SWALSC to participate in this survey.

**Mr John Walley** is the brother of Mr Olman Walley and shares the same cultural connections to the project area. Mr John Walley was nominated by SWALSC to participate in this survey.

**Mrs Louise Hansen nee Corbett** was born in Pinjarra to parents Mr Thomas Corbett, a Nyiyaparli Palyku man from Hillside Station at Snow River in the Pilbara, and Mrs Rose Corbett nee Walley who was born in New Norcia in 1910. Her grandfather on her father's side was Lawrence Corbett, an Irishman who married Mary Sam of Hillside Station. Mrs Hansen's grandfather on her mother's side was Steven Walley from New Norcia who married Joanna Isaacs from Busselton. Ms Hansen is a member of the GKB Native Title Claim group and was selected to participate in the survey.

**Mr James Kearing** was born in Pinjarra to parents Mr James Herbert Kearing and Ms Louise Hansen nee Corbett, of Pinjarra. Mr Kearing shares the same familial connections as Mrs Louise Hansen (noted above) and was selected by SWALSC to participate in this survey.

**Mr Jaidon Kearing** was born in Pinjarra to parents Mr James Herbert Kearing and Ms Louise Hansen nee Corbett, of Pinjarra. Mr Kearing shares the same familial connections as Mrs Louise Hansen (noted above) and was selected by SWALSC to participate in this survey.

**Mr Travis (Jock) Abraham** was born in Pingelly to parents Mr Matthew Abraham who was born at an old camp next to the railway outside of Narrogin and Ms Gwen Bennell Collard from Brookton. Mr Abraham's paternal grandparents are Mr Pete 'Nobby' from Wandering / Pumphrey / Pingelly area and Ms Laura Humes from Narrogin. Mr Abraham's maternal grandparents are Mr James Collard and Mrs Mable Collard (nee Bennell) both from Brookton. Mr Abraham undertook schooling in the Narrogin and Pingelly areas and worked as general farm hand, a road worker and also for the Shire of Williams Council. Mr Abraham can trace his apical ancestor back his paternal great grandparents Mr Jack Humes and Mrs Ada Bennell Humes who are buried in Narrogin. Mr Abraham is a GKB claim group member and was selected by SWALSC to participate in this survey.

**Mr Wayne Bynder** did not provide any biographic information during this survey. Mr Bynder was selected by SWALSC to participate in this survey.

## COMMUNITY CONSULTATION

### AIMS

- To establish contact with Indigenous people who retain traditional or current knowledge pertaining to the region.
- To determine if there are any sites or places of significance, as defined by Section 5 of the AHA, within the project area.
- To record any ethnographic information provided about identified sites or places.
- To generate consensual recommendations from the Indigenous community representatives in regards to any Section 18 requests and to record management strategies for identified ethnographic and archaeological sites.

### METHOD

To arrange the survey the selected informants were contacted by phone with an onsite meeting arranged. At the commencement of the meeting the informants were briefed as to the details of the project with the aid of the project plans and previously recorded Aboriginal heritage sites overlaid upon a large scale aerial photo map. Ethnographic information was recorded in a notebook and photographs of the survey process were taken. GPS coordinates of any cultural features were recorded in the field and transferred to mapping software ArcView V10 where final maps were produced.

### COMMUNITY CONSULTATION PROCESS

**On the 24<sup>th</sup> January 2018** BGA Consultants, Mr Brad Goode and Ms Louise Huxtable (Anthropologists), met eight members of the Gnaala Karla Booja WC1998/058 Native Title Claim group, Ms Gloria Bennell, Mr John Walley, Ms Louise Hansen, Mr James Kearing, Mr Travis (Jock) Abraham, Mr Olman Walley, Mr Wayne Bynder and Mr Jaidon Kearing, at 10am at the corner of Barter Road and Riseley Road in Kwinana. Mrs Jacqueline Harris (Consulting Archaeologist) from BGA and Ms Vanessa Kickett (Team Leader Aboriginal Affairs – Aboriginal Affairs Section) and Ms Bree Atkinson (Environmental Approvals – Safety Environment and Aboriginal Affairs) from the Water Corporation were also in attendance



Figure 4: GKB survey team being briefed as to the PSPD project details.

Mr Goode began the consultations by explaining that the Water Corporation wish to expand the Perth Seawater Desalination Plant at Kwinana. He advised that the existing desalination plant is a major supplier of the Perth Metropolitan water by removing salt and impurities from seawater to produce fresh water using a reverse osmosis process. Seawater is treated at the desalination plant from the ocean with the salt and other impurities removed from the seawater being returned to the ocean through a pipeline far out in the ocean. Mr Goode further advised that the rapid expansion of Perth's population has resulted in the proposal to expand the existing desalination plant into adjoining land. The proposed works are approximately 5 years away from occurring; however the approvals process is starting, subject to government funding. Mr Goode advised that the purpose of the consultation is to walk across the survey area and discuss any Aboriginal heritage sites which may be impacted upon by the proposed works.

Mrs Harris then advised the group that she had undertaken a preliminary archaeological examination of the survey area and that the group would complete the inspection together (see Harris 2018). She explained the survey methodology, stating that the group would walk transects along the survey area, which is approximately 300 metres in width by approximately 500 metres in length, from the north to the south. With the aid of an aerial photographic map Mrs Harris advised that some of the survey area consists of thick scrub vegetation and that access may be required via cleared firebreaks. Mrs Harris further advised that she did not find any archaeological material during her preliminary survey and that the area has been disturbed (ibid).

The consultants then enquired into whether the Traditional Owners had any comments or questions in regards to the proposed works to which they responded no.

After a safety briefing the group then carried out an inspection of the survey area, with the consultants discussing the cultural heritage values of the area with the Traditional Owners whilst they walked.



**Figure 5: GKB survey team inspecting the survey area.**

Once the group had completed the inspection Mr Goode summarised the consultation, advising that the Traditional Owners had stated that the native vegetation in the area contains customary significance as a food and medicine source. He stated that Ms Bennell had advised that the 'Cummock' (sp. Bindon & Chadwick 2002: 241) or Bluebell creeper (*Sollya heterophylla*) is a traditional food source with the dark blue fruits being eaten.

The Traditional Owners also advised that the area could have been a possible camping ground, due to the presence of bush foods and medicine, as well as its close proximity to the ocean for fishing.



**Figure 6: Ms Gloria Bennell inspecting the vegetation within the survey area; inset photo shows the survey team inspecting the area along the dunes.**

Mr Goode then enquired into whether the Traditional Owners are aware of any ethnographic sites, explaining that under Section 5 of the AHA these sites are defined as places of special importance and significance, such as ceremonial, ritual or mythological sites.

The Traditional Owners responded that they were not aware of any ethnographic sites, as defined by Section 5 of the AHA, located within the survey area, and that the area would have been utilised for more customary cultural practices, such as camping and fishing.

Mr Walley advised that fish, such as Pink Snapper (*Chrysophrys auratus*), would have been caught during the summer months at this location.

Ms Hansen agreed and advised that during the summertime Nyungars would make their way from inland to the coast for fishing.

Ms Bennell elaborated that camps would have been set up near fishing areas where there is freshwater available. She explained that families would camp with other Nyungars, however, once the industrial area was established in Kwinana, access to traditional and historical camping and fishing areas became restricted.

Mr Goode then advised the group that the proposed works would be a replication of the existing desalination plant located adjacent to the survey area. He enquired into whether the Traditional Owners had any major objections to the proposed works.

Ms Bennell responded, “If Perth needs water then it [the proposed desalination plant] is needed”.

Mr Abraham agreed, stating,

We all need water to survive. Without water we would be unable to live. But there are so many people in Perth that we are restricted to getting water from plastic bottles, instead of preserving and protecting water places. Nyungars knew where the water places were, and many of them haven’t been protected and are gone.

The Traditional Owners agreed, however confirmed that they support the proposed works and do not think that the proposed works will impact upon any Aboriginal heritage sites.

Ms Kickett advised the group that prior to the construction works taking place, the Traditional Owners will be consulted with again which will include a tour of the existing desalination plant to explain the technical aspects of the project.

This concluded the survey.

## COMMUNITY CONSULTATION OUTCOMES

As a result of consultations held with 8 representatives of the Gnaala Karla Booja WC1998/058 NTC group on the 24<sup>th</sup> January 2018, **no new** ethnographic sites of significance, as defined by Section 5 of the AHA, were identified within the proposed Perth Seawater Desalination Plant expansion area.

The Traditional Owners supported the proposed expansion of the Perth Seawater Desalination Plant to provide water to the growing population of the Perth Metropolitan area.

The Traditional Owners were not aware of any ethnographic sites located within the survey area, and advised that the project area would likely have been utilised by Nyungar people from inland areas for more customary cultural practices, such as camping and fishing, especially during the summer months.

## RECOMMENDATIONS

As a result of the ethnographic survey the following recommendations in relation to the *Aboriginal Heritage Act 1972* (AHA) are made:

**It is recommended** that the Water Corporation can proceed with their plans to expand the Perth Seawater Desalination Plant on Lot 1864 (PIN 292041), Lot 3 (PIN 12278354) and portions of Lot 54 (PIN 292042) and Lot 255 (PIN 12143593) without risk of breaching Section 17 of the AHA in relation to ethnographic Aboriginal Heritage Sites as defined by Section 5 of the AHA.

## BIBLIOGRAPHY

- Armstrong, 1836 cited in Brown, S.H. 1983, A Survey for Aboriginal Sites, Ethnographic Investigations Elating to some Proposed Highway and Road Developments in the Perth Metropolitan Area, Prepared for Main Roads Department
- Bates, D. 1966, *The Passing of the Aborigines*, John Murray: London.
- Bates, D. 1985, *The Native Tribes of Western Australia*, I. White (Ed.). National Library of Australia, Canberra.
- Berndt, R. M. and Berndt, C. H. (Eds).1979, *Aborigines of the West: Their Past & Their Present*, University of Western Australia Press: Perth.
- Berndt, R.M. 1999, *The World of the First Australians: Aboriginal Traditional Life, Past and Present*, Australian Institute of Aboriginal Studies: Canberra.
- Brown, S.H. 1983, A Survey for Aboriginal Sites, Ethnographic Investigations Elating to some Proposed Highway and Road Developments in the Perth Metropolitan Area, Prepared for Main Roads Department
- Collard, L. 1994, A Nyungar Interpretation of Ellensbrook Homestead and Wonnerup Homestead, Unpublished Report, Edith Cowan University, Mount Lawley, West. Australia.
- Fisher, S. 2005, Report on an ethnographic survey of the proposed Cockburn #3 Gas-Fired Power Station at Kwinana WA, report prepared by Fisher Research Pty Ltd for NewGen Power Ltd, October 2005.
- Fisher, S. and Dortch, J. 2008, Report on an Aboriginal heritage survey of the proposed Kwinana Quay, Town of Kwinana/City of Cockburn, WA, report prepared by Fisher Research Pty Ltd for Fremantle Ports, July 2008.
- Goode, B. and Harris, J. 2006, An Aboriginal Heritage Survey for the Proposed Perth Seawater Desalination Plant Two, Western Australia, A report prepared for the Water Corporation, September 2006.
- Green, N. 1984, *Broken Spears, Aborigines and Europeans in the southwest of Australia*, Focus Education Services: Perth.
- Harris, J. 2018, Report of an Archaeological Heritage Survey of Perth Seawater Desalination Plant IWSS Stage 2 Expansion: Kwinana, Western Australia, report prepared for Water Corporation, February 2018.
- Landscape Magazine 2003, *WA's Conservation, Parks and Wildlife Magazine, Summer 2002-2003*, journal extract cited in DPLH file for Place ID 3776 Indian Ocean.
- Le Souef, S. 1993, The Aborigines of King George Sound at the Time of Early European Contact: An Ethnohistorical Study of Social Organisation and Territoriality. In: de Garis, B.K. (Ed.). *Portraits of the Southwest: Aborigines, Women and the Environment*. University of Western Australia Press, Perth.
- Lyon, R, 1833, *A Glance at the Manners, and Language of the Aboriginal Inhabitants of Western Australia; with a Short Vocabulary*. In the Perth Gazette and Western Australian Journal – March/April 1833.

- Machin, B. 1989, Report of an Ethnographic Survey of the Mangles Bay Marina Development, Report prepared for the Department of Marine and Harbour.
- Machin, B. 1993, Ethnographic Survey: Dunsborough Pipeline, An unpublished report prepared for the Western Australian Water Authority.
- Machin, B. 1995, Ethnographic Survey: Jangardup Project, Unpublished report prepared for Main Roads Western Australia.
- Machin, B. 1996, Ethnographic Report: Aboriginal Heritage Survey – Albany – Lake Grace Road Amelup Section SLK 83.5 to SLK 87.0, Unpublished report for the Main Roads Department, Perth.
- Makin, C. F. 1970, *Socio-Economic Anthropological Survey of People of Aboriginal Descent in the Metropolitan Region of Perth, Western Australia*. An unpublished degree of Doctor of Philosophy of the University of Western Australia.
- McDonald Hales and Associates 1990, Supplementary Report of an Ethnographic Survey for Aboriginal Sites, Mangles Bay Rockingham. Report prepared for the Department of Marine and Harbour.
- McDonald Hales and Associates 1995, Report of an Aboriginal Heritage Survey, South-East Corridor Structure Plan. Prepared for the Minister for Planning and Infrastructure.
- McDonald Hales and Associates 2002, An Ethnographic Survey of the Proposed Concept Plan for the Redevelopment of Rotary Park, Rockingham, Western Australian. Report Prepared for the City of Rockingham.
- McDonald, E. 2003, Report of an Assessment of the Aboriginal Heritage Values of Rotary Adventure Park, Mandurah and their Implications for the Proposed Inner Mandurah East-West Link Road. Report Prepared for the City of Mandurah.
- McDonald, E. 2004, Desktop Survey of the Aboriginal Heritage Values of the South Fremantle Power Station and Switch Yard Sites. Report prepared for LandCorp.
- Moore, G.F. 1884, *Diary of Ten Years of Eventful Life of an Early Settler in Western Australia*. M. Walbrook: London.
- Myers, F.R. 1986, *Pintupi Country, Pintupi Self, Sentiment, Place and Politics among Western Desert Aborigines*, Smithsonian Institution Press, Washington and London, Australian Institute of Aboriginal Studies: Canberra.
- O'Connor, R. 1997, Report on an Ethnographic Survey of a Proposed Housing Development Near Lake Richmond in Rockingham. Report prepared for Bowman Bishaw Gorham on behalf of Allied Land Company Pty Ltd.
- O'Connor, R. 2003, Report on an Ethnographic Survey of a Proposed Water Pipeline Route in Forestdale. Report prepared for the Water Corporation.
- O'Connor, R. and Hart, T. 2003, Report of an Ethnographic Survey of the Proposed South West Metropolitan Railway Alignment. Report prepared for the New Metro Rail.
- O'Connor, R., Bodney, C. and Little, L. 1985, Preliminary Report on the Survey of Aboriginal Areas of Significance in the Perth Metropolitan and Murray River Regions, report

prepared for the Centre for Prehistory at the University of Western Australia on behalf of the Department of Aboriginal Sites at the Western Australian Museum, July 1985.

- O'Connor, R., Quartermaine, G. and Bodney, C. 1989, Report on an Investigation into the Aboriginal Significance of Wetlands and Rivers in the Perth – Bunbury Region. Western Australian Water Resources Council.
- Ralph, Locke & Smith 1990, Report of an Aboriginal Sites Survey of IP14 – East Rockingham Industrial Park. Report Prepared for Dames and Moore and the Department of Resources Development.
- Randolph, P. 2004, Lake Richmond “Fish Traps”? Report prepared for the Department of Indigenous Affairs.
- Reece, B. 1984, *Prisoners in Their Own Country: Aborigines in Western Australian Historical Writing*. In: Reece, B. and Stannage, T. (Eds.). *European – Aboriginal Relations in Western Australian History*. Department of History, University of Western Australia, Nedlands.
- Silberbauer, G. B. 1994, *A Sense of Place*. In: Burch, E.S.J and Ellena, L.J. Eds. *Key Issues in Hunter-Gatherer Research*. Oxford: Berg
- Stanner, W. 1965, *Aboriginal Territorial Organisation: Estate, Range, Domain and Regime*. *Oceania*, 33(1).
- Strawbridge, L. 2001, *Strategic Drainage Management Plan for Palm Beach and Rotary Park Enhancement*. Report prepared for Bowman Bishaw Gorham.
- Symmons, C, 1840, *Names and Census of Natives, original owners of land on the right and left banks of the Swan from Fremantle to the head of the river*. Colonial Secretary's Office Records.
- Tindale, N. B., 1974, *Aboriginal Tribes in Australia*. University of California Press, Berkley, U.S.A.

## **REPORT OF AN ARCHAEOLOGICAL HERITAGE SURVEY OF PERTH SEAWATER DESALINATION PLANT IWSS STAGE 2 EXPANSION: KWINANA, WESTERN AUSTRALIA**



*A report prepared for Water Corporation*

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February 2018

## EXECUTIVE SUMMARY

An archaeological investigation for Aboriginal heritage sites was commissioned by Water Corporation on the proposed expansion of the Perth Seawater Desalination Plant in Kwinana. Stage two of the Perth Seawater Desalination Plant consists of the following:

- 25 GL seawater desalination plant
- Intake and outfall pipes
- Minor improvements to Nicholson Road Pump Station

The proposed desalination plant is surrounded by Barter Road to the north, Kwinana Power Plant, Perth Desalination Plant, Riseley Road and Leath Road to the east and Riseley Road and Kwinana Bulk terminal to the south. Cockburn Sound forms the western boundary. The project area is an irregular shaped polygon measuring 925m north south and 750m east west at its longest and widest points, an area of some 19.5 hectares.

The field survey was undertaken on 24<sup>th</sup> January 2018 and was conducted by Mrs Jacqueline Harris, senior archaeologist. Members of Gnaala Karla Booja (GKB) Native Title Claim Group, Ms Gloria Bennell, Mr John Walley, Mr Olman Walley, Mr James Kearing, Mr Jaidon Kearing, Mr Wayne Bynder, Mr Travis (Jock) Abraham and Ms Louise Hansen assisted in the field survey.

The survey strategy consisted of a sample survey of the project area to identify any archaeological sites incorporating one person walking a number of transects spaced ~50m apart parallel to the coast. Following the initial reconnaissance, the whole GKB group later joined the survey. What started out as lineal transects became meandering transects to cover the unpredictable dune system. It was estimated that the overall percentage coverage of the designated project area was around 50%. Ground visibility within the highly disturbed coastal sand dunes was 70% changing to 15% in thickly vegetated coastal heath beyond the dunes.

The project area comprises generally fore dunes and secondary sand dunes that have been extensively disturbed and modified. Beyond the dunes the area flattens out to level ground from artificial or natural agents. There are several pockets of coastal heath to the south but its high density suggests total disturbance in the recent past. A section of land that juts out to the east has been completely covered in industrial cylinders as has the area immediately south of the desalination plant that is barren as a result of former industrial usage. The narrow coastal strip extending north is partially degraded but has been subjected to extensive rehabilitation.

An online search of the site register at Heritage and Culture Division, Department of Planning, Lands and Heritage, was undertaken in order to determine if there were any archaeological Aboriginal heritage sites or heritage places that would affect the project. The search defined that there was no archaeological site or heritage place within the project area or in close proximity.

No previously registered archaeological site or heritage place is located within the proposed development area. As no new archaeological site or heritage place was located within the project area in the course of the survey, **it is recommended** that there are no archaeological barriers present to effect the proposed development.

The removal or excavation of large quantities of sediment increases the risk of disturbing archaeological sites that may lie beneath the ground surface. **It is recommended** that Water Corporation inform any project personnel of their obligation to report any archaeological material, should this be encountered during earthmoving, as outlined under Section 15 of the *Aboriginal Heritage Act 1972*.

If Water Corporation locates an archaeological site in the process of survey or ground excavation, **it is recommended** that work cease in the immediate area. Any skeletal material should be reported to the Department of Planning, Lands & Heritage and the Western Australian Police Service. Any artefactual material should be reported to the Heritage and Culture Division, DPLH.

## INTRODUCTION

### PURPOSE

An archaeological investigation for Aboriginal heritage sites was commissioned by Water Corporation on the proposed expansion of the Perth Seawater Desalination Plant in Kwinana.

Since 2015, the Integrated Water Supply Scheme (IWSS) has experienced the lowest streamflow into dams since 1911. This highlights how inflow into our dams can no longer be relied upon as a source. A review of suitable locations found that the land adjacent to the existing desalination plant could be suitable for a plant expansion. Stage two of the Perth Seawater Desalination Plant consists of the following:

- 25 GL seawater desalination plant
- Intake and outfall pipes
- Minor improvements to Nicholson Road Pump Station

The scope of work was provided in a written document to Brad Goode & Associates Pty Ltd by Ms Vanessa Kickett, Team Leader Aboriginal Affairs, Water Corporation.

The objective of the investigation was to establish if any archaeological sites were located in the vicinity of the proposed study area, determine the integrity of any sites and any effects the proposal may have over such sites. A report was required after completion of fieldwork.

### STUDY AREA

The study area is located in the City of Kwinana, some 38km south of Perth. The proposed desalination plant is surrounded by Barter Road to the north, Kwinana Power Plant, Perth Desalination Plant, Riseley Road and Leath Road to the east and Riseley Road and Kwinana Bulk terminal to the south. Cockburn Sound forms the western boundary.

The project area is an irregular shaped polygon measuring 925m north south and 750m east west at its longest and widest points, an area of some 19.5 hectares.

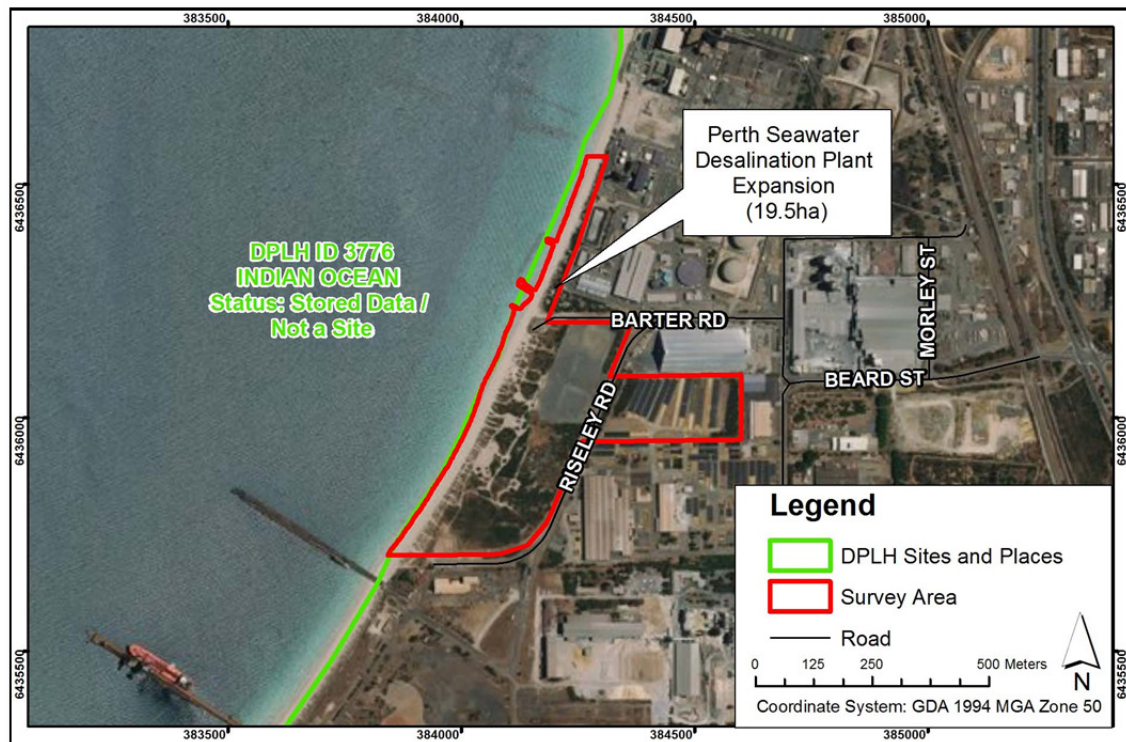


Figure 7: Map of Perth Seawater Desalination Plant Expansion survey area, Kwinana, W.A.

## ENVIRONMENT

### *Climate*

The project area lies within the south-west region of Western Australia which is characterised as a dry Mediterranean climate consisting of hot, dry summers and mild, wet winters. The mean maximum temperature is 29.5°C in February and mean minimum temperature is 10.6°C in July at Kwinana BP Refinery weather station. The region is a winter rainfall zone with annual rainfall ranges of 745mm, most of which falls between May and September. Evaporation averages 1400mm per annum. During winter the prevailing winds are the north westerlies and westerlies associated with lows and cold front activity. In summer the winds are from the south east and east in the morning with an afternoon sea breeze from the southwest (www.bom.gov.au, Beard 1981).

### *Geology & Topography*

The area lies within the Perth Basin, a deep trough filled with Phanerozoic sedimentary rocks with a surface mantle of Quaternary deposits. The project area is situated in the Quindalup Dune System, a series of parallel linear dunes running along the coast and associated with a fallen sea level over 5,000 years. They consist of calcareous sands, mostly unconsolidated but cemented in lower layers. A line of lakes and inlets separates the Quindalup Dunes from the Spearwood Ridge, a series of parallel linear dunes with depressions deposited some 80,000 years ago. They consist of hills of leached yellow sands with a hard layer compact limestone below (DCE 1980).

### *Vegetation*

The area lies within the Drummond Botanical Sub-District characterised by Low *Banksia* Woodlands, *Melaleuca* swamps and woodlands of Tuarts, Jarrah and Marri. The sub-district is further divided into complexes. The vegetation of Quindalup Dunes is a coastal dune complex of strand and foredunes of *Spinifex longifolius*, *Tetragonia implexicoma* and *Cakile maritime* and mobile and stable dunes of *Acacia Cyclops*, *Scaevola crassifolia* and *Olearia axillaries*. Low closed forests of *Melaleuca lanceolata* and *Callitris pressei* occur in small pockets (Beard 1979, Maunsell 2006).

### *Land Integrity*

The project area comprises generally fore dunes and secondary sand dunes that have been extensively disturbed and modified. Beyond the dunes the area flattens out to level ground from artificial or natural agents. There are several pockets of coastal heath to the south but its high density suggests total disturbance in the recent past. A section of land that juts out to the east has been completely covered in industrial cylinders as has the area immediately south of the desalination plant that is barren as a result of former industrial usage. The narrow coastal strip extending north is partially degraded but has been subjected to extensive rehabilitation.

## ARCHAEOLOGICAL RESEARCH

### DESKTOP STUDY

An online search of the site register at Heritage and Culture Division, Department of Planning, Lands and Heritage, was undertaken in order to determine if there were any archaeological Aboriginal heritage sites or heritage places that would affect the project. The search defined that there was no archaeological site or heritage place within the project area or in close proximity.

### REVIEW OF HERITAGE SURVEY REPORTS

A number of reports were reviewed that concern a similar geographical context or appertain to the present project area.

**Smith, J. 1989**, *An archaeological survey of a proposed Marina development at Mangles Bay, Rockingham*, Prepared for Department of Marine and Harbours.

The study area comprised a strip of coastline, 0.5km long east of Cape Peron and north of Point Peron Road. Eighty percentage of the area was surveyed. No archaeological sites were located due to poor preservation of Quindalup dunes. The author posited that there were richer resources east and west of this location that may have been the focus of occupation.

**Yates, M. 2002**, *Metropolitan Sites Project Southern region: draft report*, Prepared for the Department of Indigenous Affairs.

One section of this report considered integrity of archaeological sites in Rockingham as well as other shires. The majority of sites are located within an urban semi-rural environment with the remainder in wetlands and coastal dunes. Major site types in the shire are artefact scatters. Urban expansion threatens sites as only 4 out of 9 sites sampled are intact. Yates concluded that the majority of sites are disturbed by landscaping, firebreaks and bushtracks. Higher survival rates exist in wetlands in comparison to industrial areas.

**Jackson, G. 2001**, *A report on an Aboriginal archaeological survey of Private Port facility at James Point, Kwinana*, Prepared for James Point Pty Ltd.

The area of survey comprised 15 hectares of coastal strip and foreshore land and 80 ha of reclaimed land within Holocene coastal dunes. Beyond the dunes the area has been flattened and disturbed by recreational use and for dumping of rubbish. The survey strategy entailed walking over the area in the northern coastal strip and utilising meandering transects in accessible areas that did not have a density of vegetation cover. No sites or isolated artefacts were identified.

**Fisher, S., Dortch, J., & Cuthbert, D. 2008**, *Report on an Aboriginal heritage survey of the proposed Kwinana Quay, Town of Kwinana/City of Cockburn, WA*, Prepared for Fremantle Ports.

The archaeological component concerned 1783 hectares, over half of which contains Cockburn Sound and 868ha of landmass. The survey area was bounded by Rockingham Road to the east, Thompson Road to the south, summit of Mount Brown to the north and Cockburn Sound to the west. The survey strategy appears to only include the beach up to the high water mark, being the only area of concern to the proponent, Fremantle Ports. No sites or isolated artefacts were identified. No archaeological sites were previously recorded within the total nine square kilometres of the project area.

## SUMMARY OF REPORT RESEARCH

The reports concur that few if any artefacts or other sites have been previously located within the Quindalup Dunes. The reasons attributed to the lack of sites located is frequently poor visibility from dense coastal vegetation, poor preservation of dunes, disturbance from urban and industrial expansion, effects from landscaping, blazing of firebreaks and bush tracks, and extensive disturbance from recreational use and rubbish dumping.

Within the reports the consultants concur that the majority of artefact scatters are generally located in the vicinity of rivers, creeks, lakes, swamps and estuarine areas on yellow or grey sands within Spearwood Dunes further east from the coast.

## ARCHAEOLOGICAL CONTEXT

A considerable amount of research has been conducted in the southwest corner of Western Australia (see Dortch 1977, Hallam 1986, Ferguson 1985, Pearce 1982) and as a consequence the archaeological patterning of the region is well developed. The project area is located within the coastal sand dunes of Kwinana.

Ethnographic and archaeological surveys on the Swan Coastal Plain have confirmed the concentration of Aboriginal occupation around wetlands, swamps, rivers and estuaries (O'Connor et al 1995). This pattern was originally proposed by Hallam (1986) on the coastal plain around Perth and further enforced by subsequent research. An anomaly to this archaeological patterning, however, was suggested by Veth & Moore (1989), after an extensive survey of Scott Coastal Plain which failed to locate any archaeological material, suggesting a very low occupation density for the low-lying swampy plain.

A variety of ethno-historical sources describe the activities of Aboriginal people on the coastal plain, their subsistence techniques and semi-permanent camps about wetlands during summer. Several sources have noted that people dispersed in winter to hunt in the forested uplands, yet there is scant information pertaining to this part of the subsistence cycle. On the basis of ethno-historical evidence, Hallam (1979) has proposed that the forest was little exploited and the less dense woodland further inland was targeted by Aboriginal groups.

An alternative model has been proposed by Anderson (1984) and Pearce (1982) based on studies carried out in jarrah forests where they propose that the resources of the forest were widely exploited by highly mobile hunting groups but these groups did not establish large camp sites. Both recorded numerous small artefact scatters, comprised predominantly of quartz tools and debitage. In the South Canning Forest Anderson estimated a density of 1.7 sites per square kilometre while Pearce found a density of 1 site per square kilometre in Collie. Anderson also noted the particular problems concerning low visibility and poor access inherent in the survey of forests.

Excavations were undertaken in jarrah forests by Pearce (1982) and Anderson (1984) where datable organic material was recovered. A sandy site on the edge of a swamp at Collie established occupation at  $5810 \pm 330$  BP in the deepest part of the forest; a cave at Boddington yielded a date of  $3230 \pm 170$  BP; while Anderson recovered a date of  $1280 \pm 80$  BP at North Dandalup.

One of the earliest sites providing evidence for prehistoric occupation of the South-West of Australia is an alluvial terrace site at Upper Swan, located 25 km north-east of Perth and dated at 38,000 BP years (Pearce and Barbetti, 1981). Two other sites in the south-west have also yielded Pleistocene dates, Devil's Lair near Margaret River and Helena River. The length of occupation at the limestone cave at Devil's Lair ranges from 47,000 years BP to 6,500 years BP while Helena River yields an early date of 29,000 BP years from the basal level as well as a mid-Holocene date of 4,000 BP closer to the surface (Dortch 1977, 2002, Schwede 1990). In

addition, Dortch (1975) located a silcrete quarry and manufacturing site on the Darling Plateau at Northcliffe. His excavations revealed extensive use of geometric microliths from prior to 6,000 BP until 3,000 BP.

Well south of the project area, Lilley (1993) surveyed the coastal plain and forest uplands around Margaret River but failed to find any archaeological material in the forest and few sites on the coastal plain. He concludes that the faint archaeological signature of the region is the result of low population densities caused by a relatively impoverished resource base, particularly in jarrah forests. He considers that the technical problems inherent in the region of low site survival rates, poor access and low surface visibility, while contributing factors in site surveys, nevertheless do not affect the outcome of an actual scarcity of archaeological sites in the area.

Further southeast of the project area Ferguson (1985) produced an occupation model for the far southwest predicting extensive use of uplands during earlier times of cooler, drier climate and less dense forest. With increased rainfall and subsequent increase in forest density during the early Holocene, Ferguson proposed sparser occupation in the forest uplands and increased occupation of the coastal plain and interior woodlands.

Research into occupation patterns on the coastal plain, woodland and jarrah forest of the Perth region can be transposed to the lower south-west because of the similar environmental and geomorphic features. A large data base on site locations and assemblages exists as a result of a systematic study of the Swan Coastal Plain undertaken by Hallam (1986) in the 1970s and early 1980s. Hallam's objective was to explain the changing occupation patterns of prehistoric Aboriginal populations. Using numbers and types of sites within ecological zones as a means of comparison, Hallam describes the patterning and nature of archaeological assemblages from the littoral zone, through the coastal sand plain to the foothills and Darling Scarp.

Hallam concludes that Aboriginal occupation was focused around lakes and swamps of the Bassendean Sands and Pinjarra Plains and these occupation sites double numerically in the last few hundred years before European contact. A broad chronology was developed based on the presence of certain indicators within the assemblage. The presence of fossiliferous chert indicates the Early Phase, backed pieces and flat adzes the Middle Phase, quartz chips the Late Phase and glass or ceramic, the Final Phase. Schwede (1990), in a more recent analysis of quartz debitage, finds these chronological markers problematic, in particular, the Late Phase and concludes that all phases were rich in quartz assemblages.

From such research, a predictive model of site type and location can be projected for the project area. There is a high probability that any sites located will be scatters of less than 10 artefacts and manufactured from quartz. These sites will occur adjacent to a water source and be situated on or near tracks or cleared areas. It is necessary, however, to take into account the high level of disturbance caused by intensive farming by European colonists in the C19th and C20th that may have largely obliterated or camouflaged archaeological sites.

## SITE SIGNIFICANCE

The significance of an archaeological site is determined by its ability to address regional and site-specific research questions and by its representativeness (Bowdler 1984). Significance is a mutable quality, changing as more sites are recorded, research questions are answered or new research directions arise. Research questions that sites in the Southwest may address include:

- a) the antiquity of colonisation of the southwest zone;
- b) social and technological changes that may have occurred in the mid-Holocene;
- c) specific patterns of occupation in regional zones; and
- d) dating of industrial sequences in the region.

## **SURVEY METHODOLOGY**

The survey was conducted using a Garmin GPSmap 60CS on datum GDA and an aerial map at 1:2,000 scale demarcating the proposed project area. The survey design was formulated using a combination of predictive and systematic transects throughout the project area with particular emphasis on devegetated areas.

The field survey was undertaken on 24<sup>th</sup> January 2018 and was conducted by Mrs Jacqueline Harris, senior archaeologist. Members of Gnaala Karla Booja Native Title Claim Group, Ms Gloria Bennell, Mr John Walley, Mr Olman Walley, Mr James Kearing, Mr Jaidon Kearing, Mr Wayne Bynder, Mr Travis (Jock) Abraham and Ms Louise Hansen assisted in the field survey.

The survey strategy consisted of a sample survey of the project area to identify any archaeological sites incorporating one person walking a number of transects spaced ~50m apart parallel to the coast. Following the initial reconnaissance, the whole GKB group later joined the survey and fanned out to cover the area. Because of the nature of the terrain as a series of abrupt high dunes, what started out as lineal transects became meandering transects to cover the unpredictable dune system. Predictive intensive transects were conducted at potential areas of interest such as devegetated patches. It was estimated that the overall percentage coverage of the designated project area was around 50%. Ground visibility within the highly disturbed coastal sand dunes was 70% changing to 15% in thickly vegetated coastal heath beyond the dunes.

## **SURVEY AREA**

Amid the sand dunes are a myriad of tracks. Many tracks and devegetated patches have been subject to use as a rubbish dump or suffered from the effects of varied recreational activities. Beyond the unstable sand dunes are deflated areas that have been extensively cleared of all vegetation for past use in industrial development. A team of up to 50 race horses and/or pet horses daily use the sea in front of the project area for rehabilitation and it is assumed they may have used the sand dunes at some time for cantering. The whole project route could be described as extensively disturbed by industrial development and human or animal usage.



**Figure 8: View looking southeast showing dense vegetation on sections of the project area.**

Some pristine and dilapidated fencing surrounds sections of the project area. Other sections of land contain disintegrating concrete in clumps or linear construction. Firebreaks have been blazed around the perimeter of several portions of land. In the southwestern perimeter there is an ill-maintained car park used mainly by horse floats with a matching dilapidated disused car park in the north-western corner. The white sands are scattered with nodules of limestone, glass fragments and pebbles.

## FIELD SURVEY RESULTS

No new archaeological site, as defined by Section 5 of the *Aboriginal Heritage Act 1972*, was located within or in close proximity to the project area in the course of the survey. No isolated artefacts were located. No previously recorded archaeological site or heritage place was located within the boundaries of the survey area.

It is considered that the survey techniques employed in the field survey were sufficient to have located any major archaeological site present and visible on the surface.

## CONCLUSIONS

### DISCUSSION

An archaeological survey was conducted at the proposed expansion of Perth seawater desalination plant at Kwinana. The landform was mostly undulating sand coastal sand dunes flattening out to level ground beyond the fore dunes. Numerous tracks meandered through the sand dunes that had been well utilised from recreational activities and industrial development. Vegetation was indicative of previous clearing as illustrated by subsequent rampant regrowth of coastal heath. Rubbish and industrial remains dominate the landscape.

A study of the archival consultancy and research reports reveal a number of archaeological surveys have been undertaken in the area. Few surveys were able to locate any artefactual material on the surface in the vicinity. During the survey there was therefore low potential for archaeological sites within the Quindalup Sand Dunes, particularly so as the proposed development is some 2.5kms from the nearest water source at Long Swamp in Hope Valley. Few archaeological sites have been previously recorded away from a water source in the region.

Dortch (Fisher et al 2008) appraised previous field survey results over an extended area that surrounds the present study area. Comparing survey conditions and archaeological potential, he noted the nearest sites located were some 5km distant within Spearwood dunes. All surveys reported poor surface visibility amid industrial development with thick vegetation on road verges and vacant properties.

Artefacts scatters are rarely located within Quindalup Dunes due perhaps to the geophysical effects from sand deposited from wind and wave action as sea level rose some 6000 years ago. Modified trees are relatively common in Perth Metropolitan region but due to the scale of industrial development in this dedicated industrial zone, few examples of trees, modified or pristine, survive.

While burials were not located within a 5km range of the project area, Dortch (ibid) notes there is potential in the area as skeletal material preserves well in shelly sands but burials are more usually found in the yellow sands of Spearwood System further inland. Only one burial previously has been located in Quindalup Dunes in the Perth Metropolitan area at Safety Bay. But in Busselton and Bunbury burials are frequently located in similar coastal sands.

From his previous survey of a section of the project area Dortch (ibid) concludes that sites may exist in undeveloped parts of the area and stone artefacts and skeletal material may be preserved

beneath intact Holocene marine carbonate sediments and coastal dunes but scarred trees may only be found in areas of remnant woodland.

The predictive site pattern of the region attests to the importance of water sources in the location of archaeological sites. The terrain may have been unsuitable for long-term campsites within the unstable coastal sand dunes with the large salt lakes and wetlands east of the project area offering a more desirable location and food resource. If archaeological sites were present, according to the model, they would predictably be small quartz scatters of an ephemeral nature but of high significance due to their rarity. However, it is likely that any archaeological site on or beneath the surface, in this context, would be extensively disturbed from clearing, industry, infrastructure and recreational activities.

Ground visibility was low to moderate in sand dunes, former industrial lands and disturbed tracks. Archaeological research in coastal sand dunes, woodland and forest suggests artefact scatter sites are frequently found in disturbed ground, particularly in areas where, prior to disturbance, there is low visibility. Archaeological sites nevertheless require some land integrity for the sites to have any provenance and, thus, scientific significance. The project area has been extensively disturbed. The high disturbance factor and low to moderate visibility are seen as the major contributors to the lack of archaeological sites located in the study area.

## RECOMMENDATIONS

No previously registered archaeological site or heritage place is located within the proposed development area. As no new archaeological site or heritage place was located within the project area in the course of the survey, **it is recommended** that there are no archaeological barriers present to effect the proposed development.

The removal or excavation of large quantities of sediment increases the risk of disturbing archaeological sites that may lie beneath the ground surface. **It is recommended** that Water Corporation inform any project personnel of their obligation to report any archaeological material, should this be encountered during earthmoving, as outlined under Section 15 of the *Aboriginal Heritage Act 1972*.

If Water Corporation locates an archaeological site in the process of survey or ground excavation, **it is recommended** that work cease in the immediate area. Any skeletal material should be reported to the Department of Planning, Lands & Heritage and the Western Australian Police Service. Any artefactual material should be reported to the Heritage and Culture Division, DPLH.

## BIBLIOGRAPHY

- Anderson, J. 1984, *Between Plateau and Plain*, Occasional Papers in Prehistory, No. 4 A.N.U. Canberra.
- Beard, J.S. 1981, *Swan: Vegetation Survey of Western Australia*, U.W.A. Press
- Bowdler, S. 1984, Archaeological significance as a mutable quality, In S Sullivan & S. Bowdler (eds) *Site Survey and Significance Assessment in Australian Archaeology* R.S.P.S., A.N.U. Canberra: 1-9.
- Bureau of Meteorology 2018, *Climate statistics for Australian locations*, <[www.bom.gov.au/climate/averages/tables](http://www.bom.gov.au/climate/averages/tables)> accessed 13<sup>th</sup> February 2018.
- Dortch, C. 1975, Geometric microliths from a dated archaeological deposit near Northcliffe, Western Australia, *Journal of the Royal Society of Western Australia*. 54 103-13
- Dortch, C.E. 1977, Early and late stone industrial phases in Western Australia, in Wright R.V.S. (ed) *Stone Tools as Cultural Markers* A.I.A.S., Canberra: 104-132
- Dortch, C.E. 2002, Modelling past Aboriginal hunter-gatherer socio-economic and territorial organisation in Western Australia's lower South-west, *Archaeology in Oceania*, 37:1: 1-22.
- Ferguson, W. 1985, *A mid-Holocene depopulation of the Australian south-west*, Unpublished PhD thesis, A.N.U. Canberra.
- Fisher, S., Dortch, J., & Cuthbert, D. 2008, Report on an Aboriginal heritage survey of the proposed Kwinana Quay, Town of Kwinana/City of Cockburn, WA., Prepared for Fremantle Ports.
- Department of Conservation and Energy 1980, *Atlas of Natural Resources Darling System Western Australia*.
- Hallam, S.J. 1979, *Fire and Hearth: a study of Aboriginal usage and European usurpation in south-western Australia*, A.I.A.S. Canberra.
- Hallam, S.J. 1986, Prehistoric Aboriginal populations on the Swan Coastal Plain, Western Australia, Final Report on the Project: Australian Research Grants Scheme.
- Jackson, G. 2001, A report on an Aboriginal archaeological survey of Private Port facility at James Point, Kwinana, Prepared for James Point Pty Ltd.
- Lilley, I. 1993, Recent research in southwestern Western Australia, *Australian Archaeology*, No. 36, pp 34-41
- Maunsell Australia Pty Ltd 2006, *Spring Flora and Fauna Survey*, Prepared for Water Corporation.
- O'Connor, R. Quartermaine, G. & Yates, A. 1995, An Investigation into the Aboriginal Significance of Wetlands and Rivers in the Busselton – Walpole Region, Prepared for Water Authority of Western Australia.
- Pearce, R.H. 1982, Archaeological sites in the jarrah forest at Southwestern Australia, *Australian Archaeology*, No. 14, 18-24

- Pearce, R.H. & Barbetti, M. 1981, A 38,000 year old archaeological site at Upper Swan, Western Australia, *Archaeology in Oceania*, 16:173-178
- Schwede, M. 1990, *Quartz, the multifaceted stone: a regional prehistory of the Helena River Valley on the Swan Coastal Plain of Southwestern Australia*, Unpublished PhD thesis, University of Western Australia. Nedlands.
- Smith, J. 1989, An archaeological survey of a proposed Marina development at Mangles Bay, Rockingham, Prepared for Department of Marine and Harbours.
- Veth, P. & Moore, P. 1989, Report on an archaeological and ethnographic survey near Beenup, Augusta, W.A. Prepared for Lewis Environmental Consultants.
- Yates, M. 2002, Metropolitan Sites Project Southern region: draft report, Prepared for DIA.

## **APPENDIX 1: DPLH SITES AND PLACES REGISTER SEARCH**

### Search Criteria

No Registered Aboriginal Sites in Shapefile - Water\_Corp\_Desal\_Survey\_Area

### Disclaimer

The *Aboriginal Heritage Act 1972* preserves all Aboriginal sites in Western Australia whether or not they are registered. Aboriginal sites exist that are not recorded on the Register of Aboriginal Sites, and some registered sites may no longer exist.

The information provided is made available in good faith and is predominately based on the information provided to the Department of Planning, Lands and Heritage by third parties. The information is provided solely on the basis that readers will be responsible for making their own assessment as to the accuracy of the information. If you find any errors or omissions in our records, including our maps, it would be appreciated if you email the details to the Department at [heritageenquiries@daa.wa.gov.au](mailto:heritageenquiries@daa.wa.gov.au) and we will make every effort to rectify it as soon as possible.

### South West Settlement ILUA Disclaimer

Your heritage enquiry is on land within or adjacent to the following Indigenous Land Use Agreement(s): Gnaala Karla Booja People ILUA.

On 8 June 2015, six identical Indigenous Land Use Agreements (ILUAs) were executed across the South West by the Western Australian Government and, respectively, the Yued, Whadjuk People, Gnaala Karla Booja, Ballardong People, South West Boojarah #2 and Wagyl Kaip & Southern Noongar groups, and the South West Aboriginal Land and Sea Council (SWALSC).

The ILUAs bind the parties (including 'the State', which encompasses all State Government Departments and certain State Government agencies) to enter into a Noongar Standard Heritage Agreement (NSHA) when conducting Aboriginal Heritage Surveys in the ILUA areas, unless they have an existing heritage agreement. It is also intended that other State agencies and instrumentalities enter into the NSHA when conducting Aboriginal Heritage Surveys in the ILUA areas. It is recommended a NSHA is entered into, and an 'Activity Notice' issued under the NSHA, if there is a risk that an activity will 'impact' (i.e. by excavating, damaging, destroying or altering in any way) an Aboriginal heritage site. The Aboriginal Heritage Due Diligence Guidelines, which are referenced by the NSHA, provide guidance on how to assess the potential risk to Aboriginal heritage.

Likewise, from 8 June 2015 the Department of Mines, Industry Regulation and Safety (DMIRS) in granting Mineral, Petroleum and related Access Authority tenures within the South West Settlement ILUA areas, will place a condition on these tenures requiring a heritage agreement or a NSHA before any rights can be exercised.

If you are a State Government Department, Agency or Instrumentality, or have a heritage condition placed on your mineral or petroleum title by DMIRS, you should seek advice as to the requirement to use the NSHA for your proposed activity. The full ILUA documents, maps of the ILUA areas and the NSHA template can be found at <https://www.dpc.wa.gov.au/lantu/Claims/Pages/SouthWestSettlement.aspx>.

Further advice can also be sought from the Department of Planning, Lands and Heritage at [heritageenquiries@daa.wa.gov.au](mailto:heritageenquiries@daa.wa.gov.au).

### Copyright

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### Coordinate Accuracy

Coordinates (Easting/Northing metres) are based on the GDA 94 Datum. Accuracy is shown as a code in brackets following the coordinates.

# Aboriginal Heritage Inquiry System

## List of Registered Aboriginal Sites

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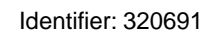
Satellite, Hybrid, Road basemap sources: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, HERE, DeLorme, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community.

Topographic basemap sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community.

## Aboriginal Heritage Inquiry System

## Map of Registered Aboriginal Sites

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### Search Criteria

#### 1 Other Heritage Places in Shapefile - Water\_Corp\_Desal\_Survey\_Area

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The ILUAs bind the parties (including 'the State', which encompasses all State Government Departments and certain State Government agencies) to enter into a Noongar Standard Heritage Agreement (NSHA) when conducting Aboriginal Heritage Surveys in the ILUA areas, unless they have an existing heritage agreement. It is also intended that other State agencies and instrumentalities enter into the NSHA when conducting Aboriginal Heritage Surveys in the ILUA areas. It is recommended a NSHA is entered into, and an 'Activity Notice' issued under the NSHA, if there is a risk that an activity will 'impact' (i.e. by excavating, damaging, destroying or altering in any way) an Aboriginal heritage site. The Aboriginal Heritage Due Diligence Guidelines, which are referenced by the NSHA, provide guidance on how to assess the potential risk to Aboriginal heritage.

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#### Coordinate Accuracy

Coordinates (Easting/Northing metres) are based on the GDA 94 Datum. Accuracy is shown as a code in brackets following the coordinates.

Terminology (NB that some terminology has varied over the life of the legislation)

Place ID/Site ID: This a unique ID assigned by the Department of Planning, Lands and Heritage to the place.

Status:

- Registered Site: The place has been assessed as meeting Section 5 of the Aboriginal Heritage Act 1972.
- Other Heritage Place which includes:
  - Stored Data / Not a Site: The place has been assessed as not meeting Section 5 of the Aboriginal Heritage Act 1972.
  - Lodged: Information has been received in relation to the place, but an assessment has not been completed at this stage to determine if it meets Section 5 of the Aboriginal Heritage Act 1972.

Access and Restrictions:

- File Restricted = No: Availability of information that the Department of Planning, Lands and Heritage holds in relation to the place is not restricted in any way.
- File Restricted = Yes: Some of the information that the Department of Planning, Lands and Heritage holds in relation to the place is restricted if it is considered culturally sensitive. This information will only be made available if the Department of Planning, Lands and Heritage receives written approval from the informants who provided the information. To request access please contact [heritageenquiries@daa.wa.gov.au](mailto:heritageenquiries@daa.wa.gov.au).
- Boundary Restricted = No: Place location is shown as accurately as the information lodged with the Registrar allows.
- Boundary Restricted = Yes: To preserve confidentiality the exact location and extent of the place is not displayed on the map. However, the shaded region (generally with an area of at least 4km<sup>2</sup>) provides a general indication of where the place is located. If you are a landowner and wish to find out more about the exact location of the place, please contact the Department of Planning, Lands and Heritage.
- Restrictions:
  - No Restrictions: Anyone can view the information.
  - Male Access Only: Only males can view restricted information.
  - Female Access Only: Only females can view restricted information.

Legacy ID: This is the former unique number that the former Department of Aboriginal Sites assigned to the place. This has been replaced by the Place ID / Site ID.

Basemap Copyright

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# Aboriginal Heritage Inquiry System

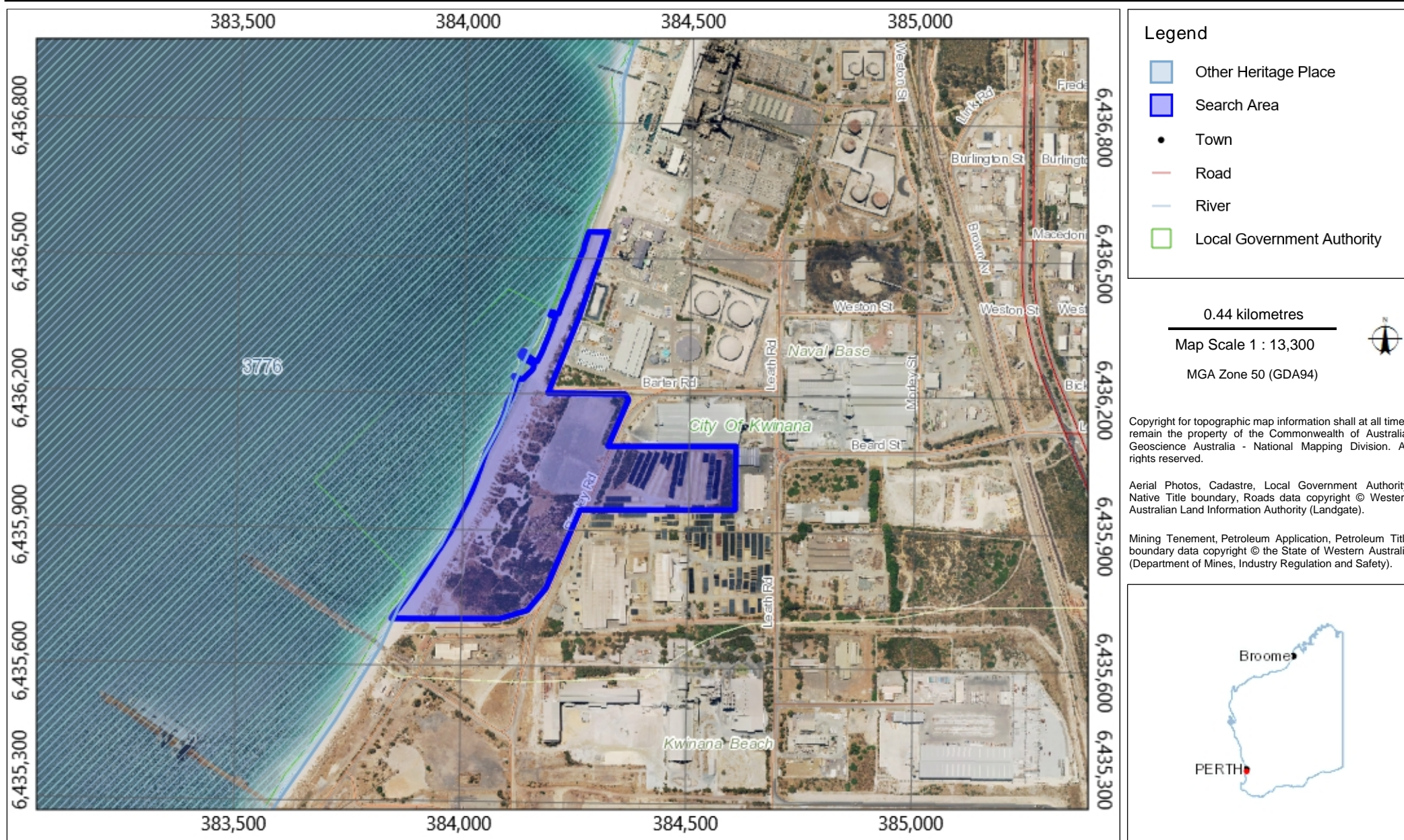
## List of Other Heritage Places

| ID   | Name         | File<br>Restricted | Boundary<br>Restricted | Restrictions              | Status                      | Type         | Knowledge Holders   | Coordinate                               | Legacy ID |
|------|--------------|--------------------|------------------------|---------------------------|-----------------------------|--------------|---|--|-----------|
| 3776 | INDIAN OCEAN | No                 | No                     | No Gender<br>Restrictions | Stored Data /<br>Not a Site | Mythological | *Registered Knowledge<br>Holder names available<br>from DAA | 372624mE 6445362mN<br>Zone 50 [Reliable] | S02169    |

# Aboriginal Heritage Inquiry System

## Map of Other Heritage Places

For further important information on using this information please see the  
Department of Planning, Lands and Heritage's Terms of Use statement at  
<http://www.daa.wa.gov.au/Terms-Of-Use/>



## APPENDIX 2: LETTER OF ADVICE

### Brad Goode & Associates Pty Ltd

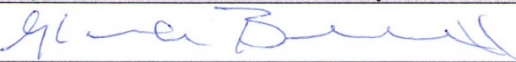
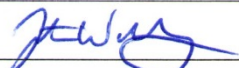
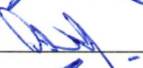

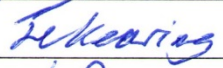
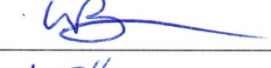
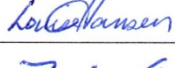
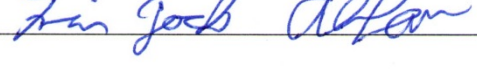
Consulting Anthropologist  
Heritage Assessments

79 Naturaliste Terrace  
DUNSBOROUGH WA 6281  
(08) 9755 3716  
bradnlee@westnet.com.au  
ACN: 134 732 040  
ABN: 41 134 732 040

24<sup>th</sup> January 2018

We the undersigned have been consulted by Brad Goode & Associates Pty Ltd on behalf of the Water Corporation for the proposed expansion of the Perth Seawater Desalination Plant project. We would like to make the following recommendations in relation to the Western Australian Aboriginal Heritage Act 1972:

- There are no new ethnographic sites, as defined by section 5 of the AHA, located within the Perth Seawater Desalination Plant project area.
- We have no further recommendations or requests to make in regards to the survey area or project.

| Gnaala Karla Booja WC1998/058 Native Title Claim Group |           |  |
|--|-----------|--|
| Gloria Bennell   | 24.1.2018 |  |
| John Walley  | 24.1.2018 |   |
| Olman Walley   | 24.1.2018 |   |
| James Kearing  | 24.1.2018 |   |
| Jayden Kearing   | 24.1.2018 |   |
| Wayne Bynder   | 24.1.2018 |  |
| Louise Hansen  | 24.1.2018 |   |
| Jock Abraham   | 24.1.2018 |  |
|  |           |  |

### **APPENDIX 3: MAP OF THE PROJECT AREA IN RELATION TO ABORIGINAL HERITAGE SITES**

