

APPENDIX 12: ETHNOGRAPHIC AND ARCHAEOLOGY SURVEYS

APPENDIX 12A: ETHNOGRAPHIC SURVEY

Summary Report of an Ethnographic Survey Doral Yalyalup Mineral Sands Project: Stage 2 Doral Yalyalup Northern Extension, near Busselton, Western Australia

*Prepared for Doral Mineral Sands & the Karri Karrak
Aboriginal Corporation*

Edward M. McDonald

June 2023



ABN 47 065 099 228

Disclaimer

The results, conclusions and recommendations contained within this report are based on information available at the time of its preparation. Whilst every effort has been made to ensure that all relevant data has been collated, the author can take no responsibility for omissions and/or inconsistencies that may result from information becoming available subsequent to the report's completion.

© Ethnoscience, Doral Mineral Sands Pty Ltd and Karri Karrak Aboriginal Corporation 2023

Abbreviations

ACMC:	Aboriginal Cultural Material Committee
AHA:	<i>Aboriginal Heritage Act 1972</i>
AHIS:	Aboriginal Heritage Inquiry System
AST:	Archaeological survey team
CAC:	Cultural Advice Committee
DPLH:	Department of Planning Lands and Heritage
Doral:	Doral Mineral Sands Pty Ltd
EST:	Ethnographic survey team
ILUA:	Indigenous Land Use Agreement
KKAC:	Karri Karrak Aboriginal Corporation
MHA:	McDonald, Hales and Associates
NSHA:	Noongar Standard Heritage Agreement
SWALSC:	South West Aboriginal Land and Sea Council
SWB:	South West Boojarah #2 (WC06/4) Native title claim

Acknowledgements

Wayne Webb (SWB)
Jack Hill (SWB)
Troy Hill (SWB)
Pearl Councillor (SWB)
Franklyn Nannup (SWB)
Mark Blurton (SWB)
Barry Pell (SWB)
David Pell (SWB)
Toni Webb (Undalup)
Ryan Hovingh (Snappy Gum)
Julie Edwards (Doral)
Craig Bovell (Doral)

Table of Contents

Introduction	1
Survey Process.....	2
Survey Results	7
Desktop Study	7
ACH Investigation Meeting	7
Consultation Regarding Archaeological Findings	8
Conclusions & Recommendations.....	8
References	9

List of Figures

Figure 1: Doral’s Yalyalup Northern Extension (blue shaded area), the existing Yalyalup mine is visible on the south side of Princefield Road (Source: Doral & AHIS)	2
---	----------

List of Plates

Plate 1: Julie Edwards (Doral) provides the EST & AST with an overview of the Yalyalup Northern Extension project at the McGibbon Track & Princefield Road intersection (Photo: McDonald, May 2023)	5
Plate 2: Ryan Hovingh (Snappy Gum) provides the EST with a summary of the archaeological research process and findings (Photo: McDonald, May 2023).....	5
Plate 3: Julie Edwards (Doral) describes the Yalyalup Northern Extension proposals to the EST at the Princefield traffic bridge on the Abba River. (Photo: McDonald May 2023)	6
Plate 4: Franklyn Nannup makes a point during consultations about the Yalyalup Northern Extension proposals (Photo: McDonald May 2023)	6

List of Tables

Table 1 Aboriginal consultants 2019 & 2023 ethnographic surveys	4
--	----------

Introduction

Doral commissioned Ethnoscience to undertake an Aboriginal cultural heritage assessment of Stage 2 of its Yalyalup Mineral Sands Project which is located in Abba River southeast of Busselton. Stage 2 comprises Doral's proposed Yalyalup Northern Extension.

Doral, which had entered into a Noongar Standard Heritage Agreement (NSHA) with the South West Aboriginal Land and Sea Council (SWALSC) and the South West Bojjarah (SWB) Indigenous Land Use Agreement members, commissioned Ethnoscience to undertake ethnographic and archaeological surveys of Stage 1 of the Yalyalup project. Stage 1 of the project was surveyed ethnographically and archaeologically in 2019 by Ethnoscience (McDonald and Phillips 2020) and Snappy Gum Heritage Services (Cue and Hovingh 2019). Since then, the Karri Karrak Aboriginal Corporation (KKAC) was set up to manage land and heritage matters for the SWB group.

The Stage 2 study is a continuation of that earlier work,. As with the Stage 1 studies, Ethnoscience conducted the ethnographic research and Snappy Gum conducted the archaeological survey of the project area, on behalf of Ethnoscience (Hovingh 2023).

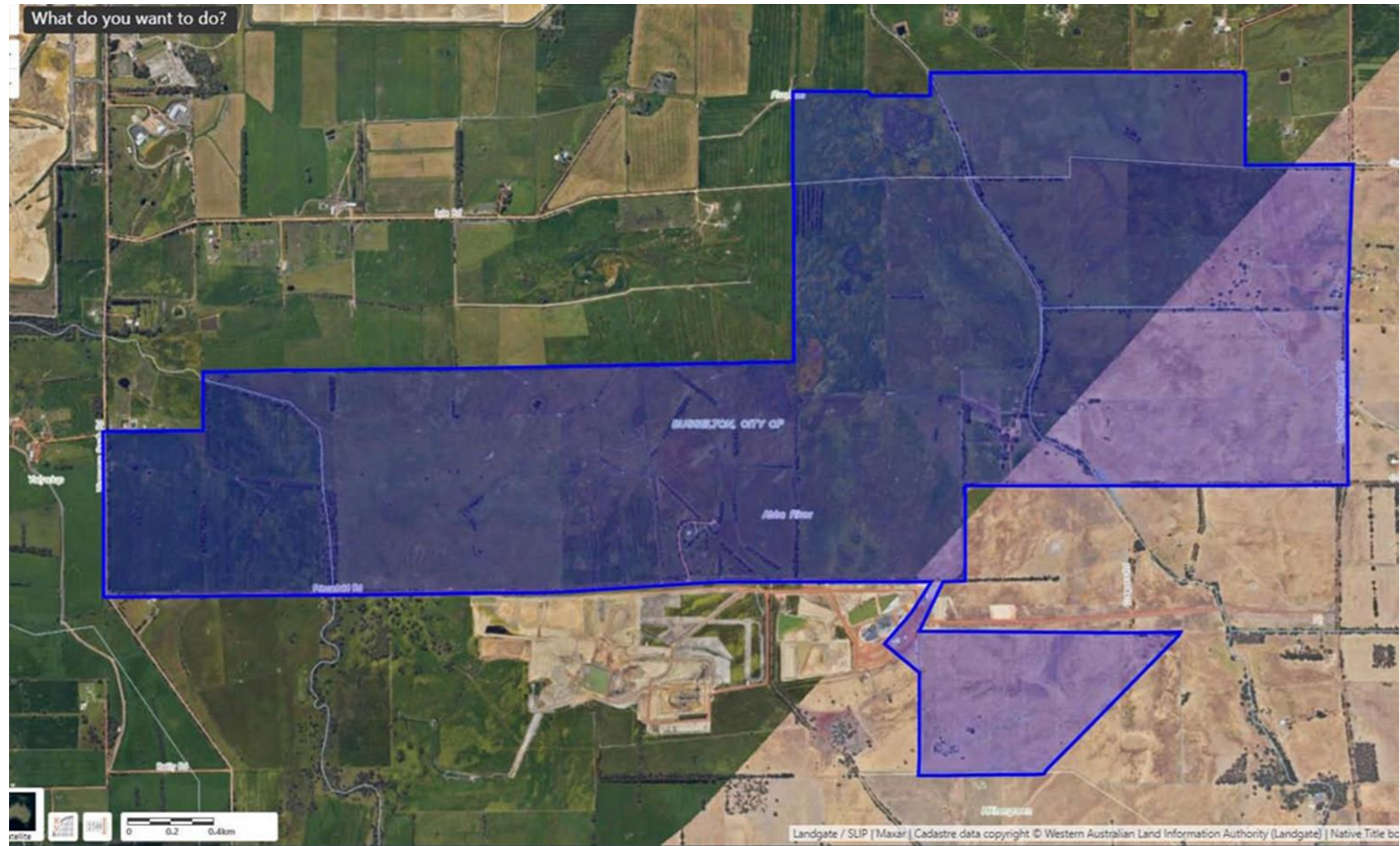


Figure 1: Doral's Yalyalup Northern Extension (blue shaded area), the existing Yalyalup mine is visible on the south side of Princefield Road (Source: Doral & AHIS)

Survey Process

Dr Edward McDonald of Ethnoscience undertook all aspects of the ethnographic survey, including the desktop research and ethnographic field survey.

The desktop research which updated the earlier studies by McDonald and Coldrick (2017) and McDonald and Phillips (2020) included an examination of DPLH's online Aboriginal Cultural Heritage Inquiry System (AHIS). A review of previous published and unpublished ethnohistorical and ethnographic material, including previous heritage reports, for example McDonald, Hales & Associates' (1994) National Estates Grants Programme Aboriginal Sites in the Lower South-west Heritage Study prepared for Gnuraren.

A site identification methodology was used for the ethnographic field study, which was undertaken on May 31, 2023, which included an ACH investigation onsite meeting and an inspection of the study area with a particular focus on the Abba River.

As a continuation of the Yalayup Stage 1 Aboriginal cultural heritage assessment, we tried to use the same Aboriginal consultants who had participated in the original Stage 1 2019 survey, as they have connections with, and are knowledgeable of the country where the project is located. Ethnoscience managed to engage six of the original 2019 seven SWB consultants for the present ethnographic field survey: Messrs Jack Hill, Franklyn Nannup, Mark Blurton, Barry Pell and Wayne Webb and Ms Pearl Councillor (Table 1 below). Mr Troy Hill participated in order to assist his incapacitated father, Jack Hill. The ethnographic survey team nominated Mr David Pell in the field as a proxy for Mr Tim Harris, who is currently interstate, and Mr Pell was consulted by telephone on June 1, 2023. Mr Jack Hill and Mr. Webb are members of the KKAC Culture Advice Committee (Table 1 below). Several of the survey team are directly linked to listed knowledge holders for the Abba River (ID 17354). For example, Mr Webb is the son of two knowledge holders (i.e., the late George and Vilma Webb) and Mr Franklyn is the son of another (i.e., the late Frank Nannup), whereas Messrs Jack Hill and Barry Pell are nephews of another listed knowledge holder (i.e., the late Ellen Hill). All of the Aboriginal consultants are familiar with the Yalayup project and other mineral sands

projects in the region. The Aboriginal consultants therefore are ‘knowledge holders’ in respect of the cultural heritage on the land.

As in 2019, Wayne and Toni Webb assisted Mr Ryan Hovingh and Ms Jessica Beckingham of Snappy Gum with the archaeological surveys (Hovingh 2023).

November 2019 Survey	June 2023 Survey
Jack Hill	Jack Hill
Pearl Councillor	Pearl Councillor
Franklyn Nannup	Franklyn Nannup
Mark Blurton	Mark Blurton
Barry Pell	Barry Pell
Tim Kumanjii Harris	David Pell*
	Troy Hill**
Wayne Webb (Arch & Ethno Surveys)	Wayne Webb (Arch & Ethno Surveys)
Toni Webb (Arch Survey)	Toni Webb (Arch Survey)

Table 1 Aboriginal consultants 2019 & 2023 ethnographic surveys

*Nominated as a proxy for Tim Harris in the field by the survey team and interviewed by telephone June 1, 2023.

** Troy Hill was assisting his father, Jack Hill, who recently had a stroke & will represent the families interests in future urveys.

ABN 47 065 099 228



Plate 1: Julie Edwards (Doral) provides the EST & AST with an overview of the Yalyalup Northern Extension project at the McGibbon Track & Princefield Road intersection (Photo: McDonald, May 2023)



Plate 2: Ryan Hovingh (Snappy Gum) provides the EST with a summary of the archaeological research process and findings (Photo: McDonald, May 2023)



Plate 3: Julie Edwards (Doral) describes the Yalyalup Northern Extension proposals to the EST at the Princefield traffic bridge on the Abba River. (Photo: McDonald May 2023)



Plate 4: Franklyn Nannup makes a point during consultations about the Yalyalup Northern Extension proposals (Photo: McDonald May 2023)

Survey Results

Desktop Study

The desktop research showed that the **Abba River (ID 17354)**, is the only registered 'Aboriginal site' within the Yalyalup Northern Extension study area. No Other Heritage Places (OPHs) are listed in the study area. This situation is unchanged since the 2019 Stage 1 cultural heritage assessment.

The Abba River therefore is the only previously known intangible Aboriginal Cultural Heritage in Doral's Stage 2 study area.

ACH Investigation Meeting

The Abba River (ID 17354) is the only intangible Aboriginal cultural heritage identified by the SWB consultants within the proposed Yalyalup Northern Extension survey area.

The SWB consultants raised no objections to Doral's proposed Yalyalup Northern Extension plans, including the proposed construction of up to two new crossings on the Abba River and the use of two existing farm crossings.

The Aboriginal consultants understood the nature and extent of the proposed impacts on the land and on the Abba River. They were satisfied with the way Ms Edwards of Doral addressed their concerns about potential impacts on the Abba River and Doral's plans for managing the river and rehabilitating the country following the termination of mining operations.

The SWB consultants, however, requested that impacts on the Abba River are monitored by SWB members.

Consultation Regarding Archaeological Findings

Messrs Hovingh and Webb, together with Ms Webb, provided the ethnographic survey team with an overview of the results of the archaeological survey. As was the case in the Stage 1 survey only isolated artefacts were recorded. In all eighteen (18) were the only tangible cultural heritage recorded (Hovingh 2023).

Messrs Hovingh and Webb, and Ms Webb noted that the country was heavily altered as a result of draining and farming practices, with little archaeological potential because of its original swampy nature (Balla 1994).

The SWB consultants were satisfied with the results of the archaeological survey and did not attribute any significance to the very limited and dispersed tangible heritage that had been recorded and left in situ .

Conclusions & Recommendations

No objections were raised by the SWB consultants to the project proceeding or limited impact (up to two crossings) on the Abba River (ID 17354) the only intangible cultural heritage identified in the project area. No significant tangible cultural heritage was recorded.

Recommendations

1. It is recommended that Doral's planned development of the Yalyalup Northern Extension proceed.
2. It is also recommended that impacts on the Abba River such as the construction of up to two proposed new crossings are monitored by SWB members.

References

- Balla, S. (1994) *Wetlands of the Swan Coastal Plain: Volume 1 Their nature and management*. Perth: Water Authority of Western Australia and the Western Australia Department of Environmental Protection.
- Cue, K. & Hovingh, R. (2019) Report on the Site Identification Archaeological Survey of the Yalyalup Mineral Sands Project survey area, east of Busselton, Western Australia – November 2019. Unpublished report prepared for the South West Bojarah People and Doral Mineral Sands Pty Ltd on behalf of Ethnoscience,
- Hovingh, R. (2023) Report of an Archaeological Survey Doral Yalyalup Mineral Sands Project: Stage 2 Doral Yalyalup Northern Extension, near Busselton, Western Australia. Unpublished report prepared for Doral on behalf of Ethnoscience.
- McDonald, E.M. & Coldrick, B. (2017) Report of a Desktop Aboriginal Heritage Assessment of Doral's Yalyalup Project Area near Busselton, Western Australia.
- McDonald, E.M. & Phillips, T. (2020) Report of an Ethnographic Survey of Doral's Yalyalup Project near Busselton, Western Australia. Unpublished report prepared by Ethnoscience for Doral Mineral Sands.
- McDonald, Hales & Associates (1994) National Estates Grants Programme Aboriginal Sites in the Lower South-west Heritage Study. Unpublished report prepared by McDonald, Hales & Associates for Gnuraren Aboriginal Progress Association.

APPENDIX 12B: ARCHAEOLOGY SURVEY

Report of an Archaeological Survey Doral Yalyalup Mineral Sands Project: Stage 2 Doral Yalyalup Northern Extension, near Busselton, Western Australia.

For Ethnoscience, the South West Boojarah People and Doral Mineral Sands Pty Ltd

Consultants Ref: 2331

Ryan Hovingh BSc Hons (Archaeology)

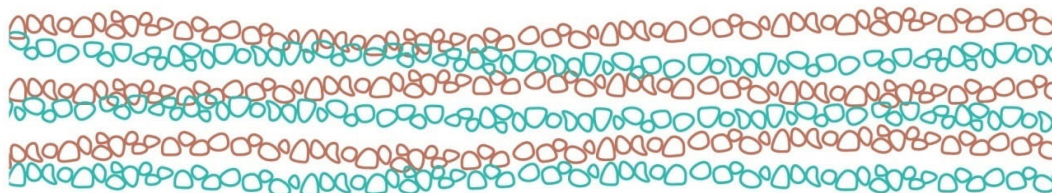
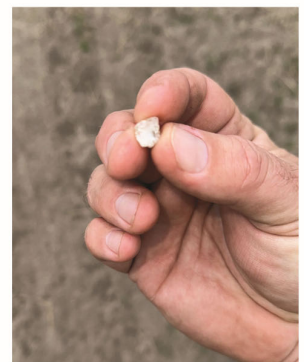
June 2023

Snappy Gum Heritage Services Pty Ltd

156 Francisco Street, Belmont WA 6104
phone: 08 9425 5220 fax: 08 6424 8786

www.snappygumheritage.com.au

Aboriginal and Torres Strait Islander viewers are warned that this report may contain images and names of deceased persons.



EXECUTIVE SUMMARY

This document details the results of a second archaeological survey related to the Yalyalup Mineral Sands Project and follows on from a previous heritage investigation undertaken in 2019 (Cue and Hovingh 2019). Doral Mineral Sands Pty Ltd (Doral), who operate the Yalyalup Mineral Sands Project, wish to extend their current mineral sands operation north into tenements E70/4496, M70/1368 and M70/1108. These tenements are located 10.5 km southeast of Busselton in southwest Western Australia. The survey area lies within the South West Boojarah #2 native title claim area (WC2006/004).

The previous investigation was undertaken immediately to the south of the current survey area (Cue and Hovingh 2019). A total of 33 isolated artefacts were located, although no archaeological sites were identified. Desktop studies did highlight the Abba River (DPLH Site 17354) as an area that required monitoring along its length during ground disturbance.

Like the previous investigation, Snappy Gum Heritage Services Pty Ltd (SGH) was commissioned by Ethnoscience on behalf of Doral Mineral Sands Pty Ltd (Doral) to undertake an archaeological survey over the proposed work area (see Figure 1) using a Site Identification methodology. This work was undertaken with the approval of the South West Boojarah traditional owners; the Karri Karrak Aboriginal Corporation (KKAC), the regional corporation for the South West Boojarah region; and their native title representative body, the South West Aboriginal Land and Sea Council (SWALSC).

The field investigation took place between 28 May to 31 May 2023. South West Boojarah representatives Wayne and Toni Webb, who were also present for the 2019 investigation, participated in the field survey and were involved in all aspects of the work. Dr Edward McDonald undertook ethnographic consultation with traditional owners and Knowledge Holders on the 31 May 2023.

Doral proposes to extend their current mineral sands operation northwards into the adjacent survey area, which covers an area of approximately 959 hectares. The works include the excavation of deposits to a depth of approximately 15 m, the removal and storage of topsoil, the processing and sieving of the soils to extract the heavy minerals such as ilmenite, and the rehabilitation of the land afterwards. The proposed works also include a new access crossing over the Abba River. These activities would be considered a Tier 3 Activity under the new *Aboriginal Cultural Heritage Act 2021* (ACHA).

As a result of the archaeological field investigation:

- The archaeological survey within the Yalyalup Mineral Sands Project: Stage 2 Northern Extension survey area is complete;
- No new Aboriginal archaeological places were identified or recorded;
- One Registered Aboriginal Site, the Abba River (DPLH Site 17354) runs north/south across the survey area; and
- A total of 18 isolated artefacts were recorded across the survey area.

These results are very similar to those from the 2019 investigation. As a result, the recommendations from this investigation echo those from Cue and Hovingh (2019):

- 1) It is **recommended** that Doral ensure that all relevant staff/contractors are informed of the location and registered status of the Abba River (DPLH Site 17354) on the DPLH Aboriginal Heritage Register. This site has historical and mythological importance and has been assessed by the ACMC to be an Aboriginal Site under the *Aboriginal Heritage Act 1972*;
- 2) Doral should continue to avoid the Abba River (DPLH Site 17354) if possible. Otherwise, it is **recommended** that Doral:
 - a) Submit an application under section 18 of the *Aboriginal Heritage Act 1972* to use the land on which the site is located. The application should be submitted to the Minister for Aboriginal Affairs for

consent to use the land prior to the conduct of any ground disturbing works, bearing in mind that the closing date for an application is 14 June 2023;

- b) Should the section 18 application not proceed, Doral will be required to consult with the Local Aboriginal Cultural Heritage Service (LACHS) or the KKAC about undertaking an Aboriginal Cultural Heritage Management Plan (ACHMP);
 - c) should authorisation under either the AHA or the ACHA be granted, it is **recommended** that Doral engage monitors (selected by the South West Bojarah people and SWALSC) to oversee ground disturbance works along the Abba River to ensure that no archaeological materials (surface or sub-surface) are disturbed.
- 3) Should any cultural materials or skeletal materials/burials be identified during ground disturbance works, Doral is reminded of their obligations under section 64 of the ACHA to report any sacred objects to the Aboriginal Cultural Heritage Council (ACH Council) and, in the case of skeletal materials, the police and should stop work immediately.
 - 4) It is **recommended** to the APMC, LACHS and SWALSC that the 18 isolated artefacts identified during the survey are not considered to require further management as an Aboriginal place as defined under section 12 of the ACHA.
 - 5) It is **recommended** to Doral that the work may proceed as planned, subject to the above recommendations, within the Yalyalup Mineral Sands Project survey area (as listed in Appendix 1 – Completed Survey Area Boundary Coordinates).

Please note that the transition from the *Aboriginal Heritage Act 1972* to the *Aboriginal Cultural Heritage Act 2021* is nearing completion. At the time of writing, the DPLH is compiling their regulations regarding the conduct of heritage investigations. Some of the above recommendations may be subject to change: Doral should continue to talk to DPLH and KNAC to ensure compliance with both heritage legislation and heritage agreements.

COPYRIGHT

This report and its contents and associated materials are subject to copyright and may not be copied in whole or in part without the written consent of the South West Boojarah People, Ethnoscience, Doral Mineral Sands Pty Ltd and Snappy Gum Heritage Services Pty Ltd.

INTELLECTUAL PROPERTY

The parties acknowledge that all Heritage Information provided by the South West Boojarah people contained in any Confidential Report remains the intellectual property of the South West Boojarah people.

DISCLAIMER

Snappy Gum Heritage Services Pty Ltd is not responsible and accepts no liability for omissions and inconsistencies that may result from information not available to the writers at the time of report preparation and/or publication.

SPATIAL ACCURACY

Data for this survey was recorded using a Garmin hand-held GPS and configured using the GDA94 coordinate system. The coordinates listed in the report are recorded within MGA Zone 50H. These coordinates are accurate to within ± 15 m (Garmin Limited 1996).

ACRONYMS & DEFINITIONS

The following acronyms are used throughout this report.

ACMC	Aboriginal Cultural Materials Committee	EPBA	Environmental Protection & Biodiversity Act 1999
ACH	Aboriginal Cultural Heritage	GDA94	Geographic datum of Australia 1994, Western Australia 2000
ACHA	<i>Aboriginal Cultural Heritage Act 2021</i>	GIS	Geographic Information System
ACH Council	Aboriginal Cultural Heritage Council	GPS	Global Positioning System
AHA	<i>Aboriginal Heritage Act 1972</i>	KKAC	Karri Karrak Aboriginal Corporation
AHIS	Aboriginal Heritage Inquiry System	NTA	Native Title Act 1993
ATSIHP	Aboriginal & Torres Strait Islander Heritage Protection Act 1984	NRTB	Native Title Representative Body
Cth	Commonwealth	OHP	Other Heritage place
DAA	Department of Aboriginal Affairs	SGH	Snappy Gum Heritage Services Pty Ltd
DPLH	Department of Planning, Lands and Heritage	SWALSC	South West Aboriginal Land and Sea Council

The following definitions are used throughout this report.

Aboriginal place	Aboriginal Cultural Heritage (ACH) protected under section 12 of the ACHA.
Desktop survey	An inspection of the Aboriginal site register, reports and other relevant materials to determine the presence or absence of Aboriginal sites or Aboriginal archaeological places within a given area.
Isolated artefact	Any artefacts that are not considered to fall within an Aboriginal archaeological place or site and are considered to have little or no archaeological significance.

CONTENTS

EXECUTIVE SUMMARY	2
Copyright	4
Intellectual Property.....	4
Disclaimer	4
Spatial Accuracy	4
Acronyms & Definitions	4
CONTENTS	5
List of Figures.....	5
List of Tables	5
INTRODUCTION	7
Proposed Development Area.....	8
Environmental Context.....	8
Legal and Ethical Context.....	11
SURVEY METHODS	13
Archaeological Site Survey Strategy	13
Overview	13
Desktop research methods.....	13
Field survey process.....	14
SURVEY RESULTS	15
Desktop Survey Results.....	15
Previous heritage surveys and previously-recorded Aboriginal archaeological sites/places.....	15
Field Survey Results.....	15
Survey request considerations	15
Aboriginal archaeological places	15
Isolated artefacts.....	15
DISCUSSION.....	17
Recommendations for management.....	17
CONCLUSION AND RECOMMENDATIONS.....	18
REFERENCE LIST	19
APPENDICIES.....	20
APPENDIX 1 – Completed Survey Area Coordinates.....	20
APPENDIX 2 – Isolated Artefacts Data.....	2

LIST OF FIGURES

Figure 1: Overview of survey area.....	10
Figure 1: Survey Results – Close View.....	16

LIST OF TABLES

Table 1: Survey participants – 28 to 31 May 2023.	7
Table 2: Yalyalup Mineral Sands Project survey area summary.	8

Table 3: Existing Aboriginal archaeological sites/places that intersect with the Yalyalup Mineral Sands Project survey area.....15
Table 4: Summary results of field investigations with the 2018 WAN survey requests.15

INTRODUCTION

This document details the results of a second archaeological survey related to the Yalyalup Mineral Sands Project that follows on from a previous heritage investigation undertaken in 2019 (Cue and Hovingh 2019). Doral Mineral Sands Pty Ltd (Doral), who operate the Yalyalup Mineral Sands Project, wishes to extend their current mineral sands operation north into tenements E70/4496, M70/1368 and M70/1108. These tenements are located 10.5 km southeast of Busselton in southwest Western Australia. The survey area lies within the South West Boojarah #2 native title claim area (WC2006/004).

Like the previous investigation, Snappy Gum Heritage Services Pty Ltd (SGH) was commissioned by Ethnoscience on behalf of Doral Mineral Sands Pty Ltd (Doral) to undertake an archaeological survey over the proposed work area (see Figure 1) using a Site Identification methodology. This work was undertaken with the approval of the South West Boojarah traditional owners; the Karri Karrak Aboriginal Corporation (KKAC), the regional corporation for the South West Boojarah region; and their native title representative body, the South West Aboriginal Land and Sea Council (SWALSC).

The field investigation took place between 28 May to 31 May 2023. South West Boojarah representatives Wayne and Toni Webb, who were also present for the 2019 investigation, participated in the field survey and were involved in all aspects of the work. Dr Edward McDonald undertook ethnographic consultation with other traditional owners and Knowledge Holders on the 31 May 2023.

Table 1: Survey participants – 28 to 31 May 2023.

SGH	South West Boojarah
Ryan Hovingh	Wayne Webb
Jessica Beckingham	Toni Webb

The purpose of this report is to:

- a) Record any newly identified Aboriginal Cultural Heritage (ACH) within the survey area to inform Doral of its location;
- b) describe the archaeological significance of any new ACH recorded using the Site Identification method; and
- c) to provide recommendations on the management and protection of these places within the proposed development area.

To this end, the following report will provide an introduction to the project, environmental context and the survey methods employed; an analysis of the desktop survey and the field results; and a discussion of the investigation. Recommendations are presented based on the results, with new ACH discussed with respect to their potential to contribute to archaeological research in the wider South-West region as well as the broader Australian landscape. To provide a background, this report will outline the context regarding archaeological research in the South-West and will discuss the key themes in Australian archaeology. An outline of the legal and ethical context regarding the recognition, protection and management of Aboriginal heritage under State and Commonwealth legislation is also described.

PROPOSED DEVELOPMENT AREA

Doral proposes to extend their current mineral sands operation north of their existing minesite, which was subject to the 2019 heritage investigation (Cue and Hovingh 2019). The new area, which lies adjacent and immediately north of their minesite, covers an area of approximately 959 hectares.

Doral proposes to undertake works that include the excavation of deposits to a depth of approximately 15 m, the removal and storage of topsoil, the processing and sieving of the soils to extract the heavy minerals such as ilmenite, and the rehabilitation of the land afterwards. The proposed works also include a new access crossing over the Abba River.

The above proposed works are likely to be considered Tier 3 activities under the *Aboriginal Cultural Heritage Act 2021 (AHA)* – see also Division 1, subdivision 4 of the *Aboriginal Cultural Heritage Act 2021: Activity Tiers (Government of Western Australia 2023:9)*.

Much of the disturbed area is on cleared agricultural land. Summary information is listed below.

Table 2: Yalyalup Mineral Sands Project survey area summary.

Survey area	Proposed activity	Work Program	Tenement No.	Area (km ²)
Yalyalup Mineral Sands Project	Sand mining, infrastructure and creek crossing	Site Identification	E70/4496, M70/1368 and M70/1108	9.6

ENVIRONMENTAL CONTEXT

The survey area is located immediately north of that surveyed in 2019. As a result, the environmental context is similar to that described in Cue and Hovingh (2019:8-9): most of the area has been cleared of native vegetation to make way for pasture, paddocks, tracks and a couple of homesteads.

Native vegetation in the area is minor, with remnants of *Melaleuca* spp. trees (paperbarks) to the north and a thick understory of native weeds and sedges along parts of the Abba River. Ground surface visibility in these areas is low (see Photo 3).

Like the previous investigation, the paddocks have very little ground surface visibility except where cattle dig holes, or congregate at gates and water troughs. Continuous trampling at these locations has removed the introduced grasses, leaving small sandy openings (see Photo 1). These are generally comprised on super fine white/grey sands, with a few veins of yellow sand occasionally visible. Coffee rock was noted in places. Most of the survey area is generally quite low-lying, with a few low rises noted in towards the south.



Photo 1: Cattle and horses have removed vegetation in some areas, providing sandy openings that were inspected by the survey team.

It is evident that the area is heavily modified, especially those parts of the Abba River in the northern parts of the survey area (see Photo 2). It is clear that the Abba River has been widened and deepened. Tributaries have been cut into the paddocks running along fence lines to drain water off the wetlands. The construction of such drains is common along much of the Swan Coastal Plain:

“Urban drains were built to prevent flooding due to storm events, or where years of high rainfall produced flooding problems along river floodplains as they did in Busselton, parts of Bunbury and Capel” (Balla 1994, WA Water Resources Council 1992:83).

Photographs of the Abba River were taken during the survey at two locations along its length.



Photo 2: Incised eastern edge of the Abba River in the northern parts of the survey area.



Photo 3: Heavily vegetated parts of the Abba River are located to the south.

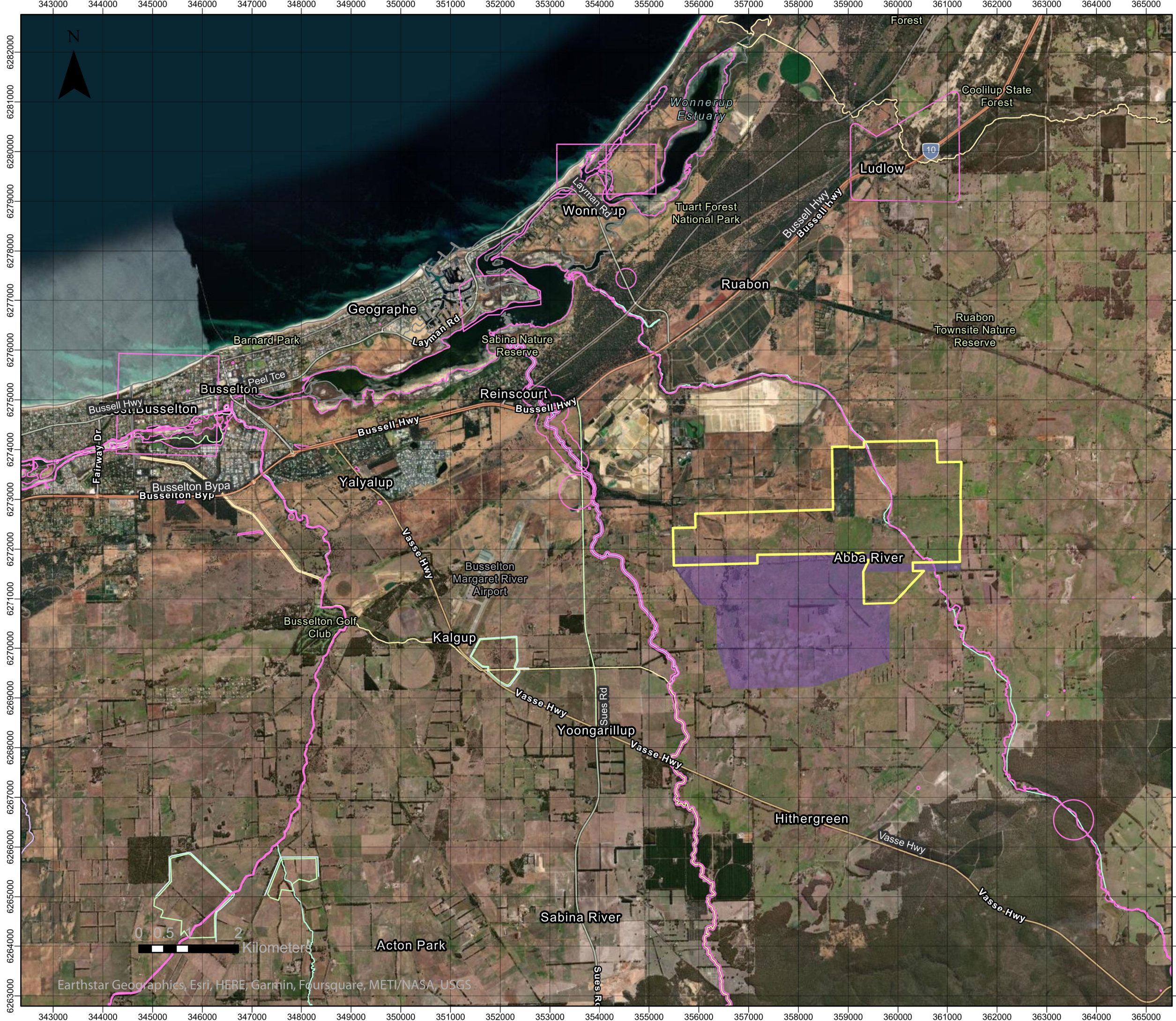


Figure 1: Survey Area - June 2023

- Survey Area**
 - Survey Area - 2023
 - Survey Area - 2019
- Heritage Places**
 - Aboriginal Heritage Places (DPLH-001)
- Environment**
 - Watercourses**
 - Coastal Waterline
 - Estuarine
 - Infrastructure
 - Insignificant Trib
 - Inundation Area
 - Mainstream
 - Major River
 - Major Trib
 - Minor River
 - Minor Trib
 - MinorTrib
 - Paleo-Drainage Line
 - Significant Stream
- Roads**
 - Freeways & Highways
 - Freeway,Sealed
 - NationalHighway,Sealed
 - StateHighway,Sealed

Compiled By: Ryan Hovingh
 Tuesday, 20 June 2023
www.snappygumheritage.com.au

Spatial Reference
 Name: GDA 1994 MGA Zone 50
 GCS: GCS GDA 1994
 Datum: GDA 1994
 Projection: Transverse Mercator



LEGAL AND ETHICAL CONTEXT

Aboriginal archaeological surveys take place within a legal and ethical framework that underpins survey methods, survey findings, cultural heritage recommendations and the approvals process.

There are a number of Commonwealth and State Acts that provide for the recognition, protection and management of indigenous rights and interests in relation to land and heritage. In Western Australia, the past *Aboriginal Heritage Act 1972 (WA)* has now been superseded with the *Aboriginal Cultural Heritage Act 2021 (ACHA)*, which now provides the principal legislative framework for the management of tangible and intangible Aboriginal heritage across the state. It should be noted that, at the time of writing, the shift between the two pieces of legislation is nearing the end of a stage of transition and many of the processes and guidelines are still being determined.

The ACHA protects Aboriginal Cultural Heritage under section 12 such as: Aboriginal places (s12b (i)), Aboriginal objects (s12b (ii)), cultural landscapes (s12b (iii)) and Aboriginal ancestral remains (s12b (iv)). Harming ACH can be considered an offence under section 95 of the ACHA but, contrary to the lower figures in section 95, recent guidelines released by the DPLH, suggest that fines can be up to \$10 million and include imprisonment.

Under the ACHA, a proponent is obligated to undertake a Due Diligence Assessment (DDA) to determine if their proposed works impacts Aboriginal cultural heritage. Some of this information is documented on the ACH Register, a database that is derived from the previous Register of Aboriginal Sites and Objects as per the AHA. It should be noted that this is not a complete record and proponents will need to exercise caution on the datasets they use to make these assessments.

The management of harm is subject to a Tier-based system which has four levels: Exempt, Tier 1, Tier 2 and Tier 3. These are discussed in the 'Activity Tiers' notes released by the DPLH in late May 2023 (Government of Western Australia 2023). Should a proposed activity have the potential to harm ACH: Exempt and Tier 1 activities can be undertaken; Tier 2 activities require a Permit; and Tier 3 activities require an Aboriginal Cultural Heritage Management Plan (ACHMP) prior to undertaking the works. It should be noted that the activities outlined in the various tiers vary between industries.

Central to the implementation of the DDA, consultation, the selection of Knowledge Holders, the conduct of heritage investigations, and the management of ACHMP and permits is the Local Aboriginal Cultural Heritage Service (LACHS), which is sometimes a separate body to the native title group. The LACHS are selected by the ACH Council, who oversees the administration of the ACHA.

While the state legislation plays a role in the management of ACH, it should be noted that the Native Title Act, and the heritage agreements subject to that Act, still play a role. It is likely that the ACHA, and the survey guidelines yet to be released, will be considered a minimum standard subject to a discussion between the proponent, the LACHS and the native title group.

The proponent should also be aware of the application of the *Native Title Act 1993 (Cth)* ("**NTA**"), which establishes a process in which native title rights and interests are recognised, as well as how various acts affecting such native title rights and interests are to be dealt with. These native title rights and interests may include the right of exclusive possession and use for traditional purposes by the holders of native title such as camping, fishing, hunting, taking traditional resources, carrying out cultural and religious activities and teaching of law and custom on land where native title has been determined to exist by the Federal Court of Australia. Where an act proposed to be carried out on land or waters is likely to affect native title, the NTA sets out procedures which must be followed in order for the act to be valid ("**future act provision**"). Examples of future acts include the grant of mining leases, exploration licences and some compulsory acquisitions by the government. Certain future acts give rise to a right to negotiate under the NTA whereby the government, the developer and the native title party must negotiate "in good faith" about the effects of the proposed activities on the native title party's rights and interests.

Aboriginal archaeological sites may also fall within the jurisdiction of the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (Cth) ("**ATSIHP Act**"). The ATSIHP Act enables an Aboriginal person or group to apply to the Minister for a declaration to preserve and protect, by way of interim or permanent declaration, from injury or desecration areas or objects of particular significance to Aboriginal people in accordance with Aboriginal traditions. A person who engages in conduct in contravention of a provision of such declaration commits an offence under the ATSIHP Act.

Similarly, 'outstanding' sites of nationwide heritage significance can also be protected under the *Environmental Protection and Biodiversity Conservation Act 1999* (Cth) ("**EPBC**") but few Indigenous archaeological sites to date are recognised under this Act. Places where heritage values are linked directly to the physical and biological attributes of the environment may also be assessed in accordance with the *Environmental Protection Act 1986* (Environmental Protection Authority 2004). The *Assessment of Aboriginal Heritage* Guidance Statement No. 41 (Environmental Protection Authority 2004) is a product of this legislation.

There are also legislative provisions which apply to specific types of sites. For example, if Indigenous human remains are uncovered by any development, the *Coroners Act (1996)* (WA), the ACHA and the ATSIHP Act would be applicable. If any human remains are uncovered during development, the police and the Department of Planning, Lands and Heritage must be notified immediately.

SGH is also guided by ethical responsibilities that support Aboriginal input and recognise that the archaeological record is a non-renewable resource. As such, SGH advocates the conservation, curation and preservation of archaeological sites, assemblages, collections and archival records where possible. For more information, please refer to the Australian Association of Consulting Archaeologists' website (2011) www.aacai.com.au.

Disclaimer

The above material is a summary produced by the writer based on the writer's own opinion, knowledge and experience. It is not intended to be used as legal reference or constitute any type of legal advice in respect to the subject matter. Persons wishing to rely on the above material should seek independent legal advice.

ARCHAEOLOGICAL SITE SURVEY STRATEGY

Overview

The archaeological heritage investigation of the Yalyalup Mineral Sands Project survey area followed a Site Identification survey methodology in a manner that copied that used in 2019.

The main objective of a Site Identification survey is to:

- Identify any known and/or potential ACH concerns that may be impacted upon by the proposed development;
- Locate/record Aboriginal places of archaeological value in enough detail for Doral to lodge a section 18 application to DPLH (if required); and
- Make recommendations regarding the management of any Aboriginal places, including any further research and/or consultation that may be required.

The Site Identification methodology aims to generate enough information to assess the archaeological significance and representativeness of an Aboriginal archaeological place. The Consultant (SGH) is expected to provide a sufficiently detailed recording of each newly-identified Aboriginal place to address the DPLH Heritage Information Submission Form (HISF), enabling Doral to give notice to the DPLH/ACMC under section 18 of the AHA. Expectations for this level of recording include (but are not limited to):

- Significance assessments addressing DPLH section 5 guidelines, which have since been removed from the DPLH website (see the Legal and Ethics section of this report);
- A professional opinion regarding site representativeness;
- Recommendations as to what basis under the AHA each site applies
- Recommendations as to subsequent mitigative measures including those related to section 16 and 18 of the AHA.

In addition to the above, SGH also ensured independent industry standards were maintained after consideration of the wider industry discussions about significance assessment. This is discussed further below.

Desktop research methods

Prior to the field investigation, SGH searched DPLH's Aboriginal Heritage Inquiry System (AHIS) for any reports or previously recorded Aboriginal places within 200 m of the survey requests (Appendix 3). This was undertaken to identify previously recorded places that may require management during the field investigation. SGH also reviewed site and report information supplied by Doral and Ethnoscience.

Please note that problems with data stored in the AHIS database must be acknowledged. First, many Aboriginal groups and proponents prefer to maintain their own databases of heritage data so these documents do not always end up on the AHIS database unless they are required for approvals. Second, data have been recorded by a variety of consultants under differing regulatory regimes and recording standards. Third, survey areas have been determined by proponent requirements rather than a sampling strategy so there are inherent biases in site distribution. However, as the largest source of information about Aboriginal archaeological places in the South-West, the AHIS database provides a useful overview of site types likely to be encountered in an area and their distribution and frequency.

Field survey process

Field investigation

As was detailed in Cue and Hovingh (2019), the extensive disturbance to the vast majority of the survey area as a result of decades of sustained agricultural use. The survey team targeted any areas of remnant vegetation, open patches where the ground was visible (such as horse and cattle pads, deflations and dams), tracks and firebreaks. Areas along the Abba River with high ground surface visibility were also targeted. A 4WD vehicle was used to access Lots that had not been recently seeded. Where open areas were identified, these places were inspected by the survey team on foot.

Several factors, though primarily ground surface visibility, may limit or bias the survey results. This being the case, SGH recognises that the survey is a sampling exercise designed to identify as many Aboriginal archaeological places as possible but acknowledges that the outcomes of any archaeological surface survey may in general terms only be representative of the visible rather than the actual archaeological record. To minimise any limitation or bias, several strategies are employed:

- a) The use of a purposive sampling strategy (that is, targeting high potential landscape features like dams, deflations, fire breaks, etc);
- b) Team members were encouraged to walk at a pace commensurate with their experience and/or physical ability while being mindful of survey timeframes;
- c) Surveys were undertaken when lighting and weather conditions were adequate to identify artefactual materials.

The heritage assessment is used to determine the presence or absence of newly-identified Aboriginal cultural material. Once an artefact and/or cultural feature is identified, an assessment is made as to its suitability for being an Aboriginal place under section 12 of the ACHA. If it is deemed to meet the criteria of a "site" under the AHA, the Aboriginal archaeological place is recorded as detailed in Cue and Hovingh (2019). As such, it will not be repeated here.

SURVEY RESULTS

DESKTOP SURVEY RESULTS

Previous heritage surveys and previously-recorded Aboriginal archaeological sites/places

Doral commissioned Ethnoscience to undertake a desktop assessment of the Yalyalup Mineral Sands Project survey area in 2017 (see McDonald and Coldrick 2017), with an addendum issued in 2019 (McDonald 2019). The findings of the desktop review were similar to that discussed in Cue and Hovingh (2019) as no heritage investigations have been undertaken in the immediate area since that time.

Table 3: Existing Aboriginal archaeological sites/places that intersect with the Yalyalup Mineral Sands Project survey area.

Place Name	DPLH ID	Status	Site Type	Proposed Action
Abba River	17354	Registered Site	Historical, Mythological	Section 18

FIELD SURVEY RESULTS

Survey request considerations

The archaeological investigation within the Yalyalup Mineral Sands Project: Stage 2 Northern Extension survey area is complete. Coordinates of the completed survey area are listed in Appendix 1. A summary of the survey results is presented in Table 4.

Table 4: Summary results of field investigations with the 2018 WAN survey requests.

Survey area	Proposed activity	Survey status	Heritage considerations
Yalyalup Mineral Sands Project	Sand mining, infrastructure and creek crossing	Complete	Abba River (DPLH ID 17354)

Aboriginal archaeological places

As a result of the archaeological field investigation, no new ACH was identified or recorded.

Isolated artefacts

A total of eighteen (18) isolated artefacts were recorded across the survey area (details provided in Appendix 2). Neither the SGH archaeologists nor the South West Booijarah representatives expressed any particular importance or significance to these artefacts at the time of survey but recognised that they served to demonstrate the presence of Aboriginal people occupying the area. As a consequence, they are not likely to require management as ACH under section 12 of the ACHA.

Based on the above, SGH would suggest that the isolated finds do not warrant special protection during the proposed works, although Doral is encouraged to seek advice from the DPLH and refer to their heritage agreement with the South West Booijarah people.



SNAPPY GUM
HERITAGE SERVICES

Figure 2: Survey Area - Close View

Survey Area

- Survey Area - 2023
- Survey Area - 2019

Cadastre (No Attributes)
(LGATE-001)

Heritage Places

- Aboriginal Heritage Places (DPLH-001)

Environment

Watercourses

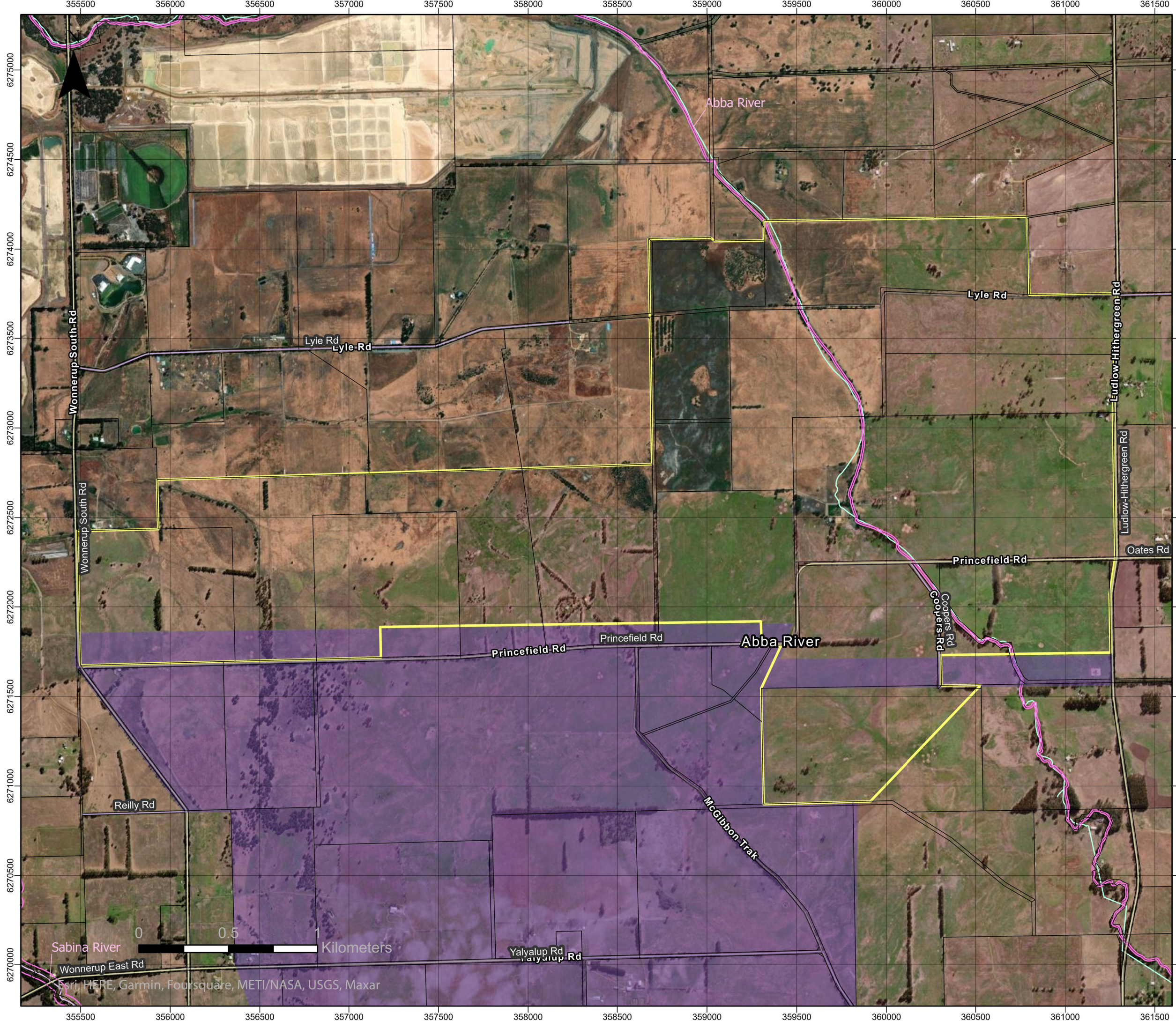
- Coastal Waterline
- Estuarine
- Infrastructure
- Insignificant Trib
- Inundation Area
- Mainstream
- Major River
- Major Trib
- Minor River
- Minor Trib
- Minor Trib
- Paleo-Drainage Line
- Significant Stream

Roads

- Freeways & Highways
- Freeway, Sealed

Compiled By: Ryan Hovingh
Wednesday, 21 June 2023
www.snappygumheritage.com.au

Spatial Reference
Name: GDA 1994 MGA Zone 50
GCS: GCS GDA 1994
Datum: GDA 1994
Projection: Transverse Mercator



0 0.5 1 Kilometers
Data sources: Esri, HERE, Garmin, Foursquare, METI/NASA, USGS, Maxar

DISCUSSION

As with Cue and Hovingh (2019), the discussions with Wayne Webb and Toni Webb mirrored their previous sentiments, that “they consider that the general survey area has a low potential for sites as the landscape used to be wetlands and as such would not have been suitable for occupation, although hunting would have been undertaken in the area. Owing to this, they suggested that areas with a higher potential for archaeological materials are likely to exist on the few areas of higher ground (though within the survey area, this is limited to a few low rises at best). It is considered that there is some potential for sub-surface artefacts given the amount of trampling and the nature of the sands that exist under the grasses” (Cue and Hovingh 2019:26).

The issues discussed with the previous report are relevant to the findings of this heritage investigation as well, namely:

- i) That there is an increased risk of ACH near the Abba River. Monitoring of any ground disturbance within 300 m of the Abba River should be undertaken to identify any subsurface ACH;
- ii) That there may be skeletal material/burials located within the Yalyalup Mineral Sands Project: Stage 2 Northern Extension.

Recommendations for management

As per Cue and Hovingh (2019), Doral should ensure that all relevant staff/contractors are informed of the location and registered status of the Abba River (DPLH Site 17354), a Registered Aboriginal Site on the DPLH Aboriginal Heritage Register. This site has historical and mythological importance and has been assessed by the ACMC to be an Aboriginal Site under section 5 of the *Aboriginal Heritage Act 1972* and will be considered an Aboriginal place under section 12 of the ACHA. Doral should therefore submit an application under section 18 of the AHA to the Minister of Aboriginal Affairs for consent to use the land prior to the conduct of any ground disturbing works. SGH also recommends monitoring of ground disturbing works along the Abba River by representatives of the South West Boojarah people.

Should skeletal materials be uncovered during the course of ground disturbance and excavation works, Doral staff/contractors should stop work immediately and contact the police and the DPLH to inform them, as per section 15 of the AHA and section 17 of the *Coroners Act 1966*, of the existence of the skeletal material/burial.

Finally, Doral is reminded of their obligations to report the discovery of any cultural material to the DPLH and should stop work immediately.

CONCLUSION AND RECOMMENDATIONS

As a result of the archaeological field investigation:

- The archaeological survey within the Yalyalup Mineral Sands Project: Stage 2 Northern Extension survey area is complete;
- No new Aboriginal archaeological places were identified or recorded;
- One Registered Aboriginal Site, the Abba River (DPLH Site 17354) runs north/south across the survey area; and
- A total of 18 isolated artefacts were recorded across the survey area.

These results are very similar to those from the 2019 investigation. As a result, the recommendations from this investigation echo those from Cue and Hovingh (2019):

- 1) It is **recommended** that Doral ensure that all relevant staff/contractors are informed of the location and registered status of the Abba River (DPLH Site 17354) on the DPLH Aboriginal Heritage Register. This site has historical and mythological importance and has been assessed by the ACMC to be an Aboriginal Site under the *Aboriginal Heritage Act 1972*;
- 2) Doral should continue to avoid the Abba River (DPLH Site 17354) if possible. Otherwise, it is **recommended** that Doral:
 - a) Submit an application under section 18 of the *Aboriginal Heritage Act 1972* to use the land on which the site is located. The application should be submitted to the Minister for Aboriginal Affairs for consent to use the land prior to the conduct of any ground disturbing works, bearing in mind that the closing date for an application is 14 June 2023;
 - b) Should the section 18 application not proceed, Doral will be required to consult with the Local Aboriginal Cultural Heritage Service (LACHS) or the KKAC about undertaking an Aboriginal Cultural Heritage Management Plan (ACHMP);
 - c) should authorisation under either the AHA or the ACHA be granted, it is **recommended** that Doral engage monitors (selected by the South West Boojarah people and KKAC) to oversee ground disturbance works along the Abba River to ensure that no archaeological materials (surface or sub-surface) are disturbed.
- 3) Should any cultural materials or skeletal materials/burials be identified during ground disturbance works, Doral is reminded of their obligations under section 64 of the ACHA to report any sacred objects to the Aboriginal Cultural Heritage Council (ACH Council) and, in the case of skeletal materials, the police and should stop work immediately.
- 4) It is **recommended** to the ACMC, LACHS and KKAC that the 171 isolated artefacts identified during the survey are not considered to require further management as an Aboriginal place as defined under section 12 of the ACHA.
- 5) It is **recommended** to Doral that the work may proceed as planned, subject to the above recommendations, within the Yalyalup Mineral Sands Project survey area (as listed in Appendix 1 – Completed Survey Area Boundary Coordinates).

Please note that the transition from the *Aboriginal Heritage Act 1972* to the *Aboriginal Cultural Heritage Act 2021* is nearing completion. At the time of writing, the DPLH is compiling their regulations regarding the conduct of heritage investigations. Some of the above recommendations may be subject to change: Doral should continue to talk to DPLH and KNAC to ensure compliance with both heritage legislation and heritage agreements.

REFERENCE LIST

Australian Association of Consulting Archaeologists Inc. (2011). "Code of Ethics." 2011, from http://www.aacai.com.au//index.php?option=com_content&task=view&id=14&Itemid=27.

Balla, S. (1994). Wetlands of the Swan Coastal Plain: their nature and management. **1**.

Cue, K. and Hovingh, R. (2019). Report on the Site Identification Archaeological Survey of the Yalyalup Mineral Sands Project survey area, east of Busselton, Western Australia – November 2019. Unpublished report for Ethnoscience, the South West Boorah People and

Doral Mineral Sands Pty Ltd. Belmont, WA, Snappy Gum Heritage Services Pty Ltd.

Environmental Protection Authority (2004). Guidance for the Assessment of Environmental Factors (in accordance with the Environmental Protection Act 1986). Assessment of Aboriginal Heritage No 41. Perth, Western Australia, Environmental Protection Authority.

Garmin Limited. (1996). "What is GPS?" Retrieved 11.01.2019, 2019, from <http://www8.garmin.com/aboutGPS/>.

Government of Western Australia (2023). Aboriginal Cultural Heritage Act 2021: Activity Tiers. D. o. A. Affairs. Perth, WA.

McDonald, E. (2019). Addendum to Report of a Desktop Aboriginal Heritage Assessment of Doral's Yalyalup Project Area near Busselton, Western Australia (July 2017). Unpublished report prepared for Doral Mineral Sands Pty Ltd. Melville, WA, Ethnoscience.

McDonald, E. and Coldrick, B. (2017). Report of a Desktop Aboriginal Heritage Assessment of Doral's Yalyalup Project Area near Busselton, Western Australia. Unpublished report prepared for Doral Mineral Sands Pty Ltd. Melville, WA, Ethnoscience.

WA Water Resources Council (1992). Drainage in rural waters: background, issues, a vision and recommendations for the future. , WA Water Resources Council and Soil and Land Conservation Council of WA.: 75.

APPENDICIES

APPENDIX 1 – COMPLETED SURVEY AREA COORDINATES

Survey Area	Point	Easting (mE)	Northing (mN)	Point	Easting (mE)	Northing (mN)
Yalyalup Mineral Sands Project	01	360785.71	6274181.00	22	359412.13	6271784.42
	02	360796.08	6273879.67	23	359411.29	6271785.33
	03	360796.94	6273831.66	24	359190.23	6271780.88
	04	360798.70	6273803.73	25	359189.34	6271800.80
	05	360799.52	6273745.13	26	359304.02	6271803.04
	06	360799.63	6273745.13	27	359300.03	6271919.40
	07	360799.63	6273744.94	28	357174.84	6271888.02
	08	361282.68	6273752.82	29	357178.34	6271717.28
	09	361282.80	6273733.04	30	355498.28	6271673.47
	10	361272.38	6273329.98	31	355480.16	6272425.15
	11	361266.13	6273085.34	32	355933.55	6272435.90
	12	361279.37	6272280.43	33	355926.98	6272711.28
	13	361247.59	6272075.11	34	358694.50	6272797.97
	14	361253.19	6271745.35	35	358674.95	6274055.93
	15	360306.10	6271731.00	36	358976.16	6274062.52
	16	360308.64	6271560.59	37	359020.75	6274063.49
	17	360529.39	6271563.38	38	359042.03	6274043.96
	18	359910.35	6270914.44	39	359316.38	6274047.85
	19	359315.89	6270898.15	40	359317.01	6274157.50
	20	359301.56	6271544.47	41	360785.71	6274181.00
	21	359412.75	6271784.05	22	359412.13	6271784.42

Datum: GDA94 Zone 50.

APPENDIX 2 – ISOLATED ARTEFACTS DATA

ID	Easting	Northing	Artefact Type	Lithology	Maximum Length
1	359734	6271163	Debris	Quartz	8
2	359734	6271163	Debris	Quartz	6
3	359734	6271163	Debris	Quartz	4
4	359734	6271164	Debris	Quartz	2
5	359734	6271164	Complete Flake	Quartz	11
6	359734	6271165	Debris	Quartz	7
7	359734	6271164	Debris	Quartz	11
8	359734	6271164	Debris	Quartz	3
9	359734	6271164	Debris	Quartz	7
10	359737	6271163	Debris	Quartz	11
11	359737	6271163	Complete Flake	Quartz	10
12	359737	6271163	Debris	Quartz	4
13	359737	6271161	Complete Flake	Quartz	26
14	359756	6271148	Debris	Quartz	12
15	359758	6271146	Debris	Quartz	11
16	359756	6271148	Debris	Quartz	16
17	359493	6272655	Complete Flake	Quartz	12
18	355683	6272234	Complete Flake	Quartz	23

Datum: GDA94 Zone 50.