



**Aboriginal Heritage Survey Report with the Widi Mob at the Karara Iron Ore Mine - Long Term Mine Planning survey areas, for Karara Mining Limited, Western Australia, June 2020**

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*Damien Lafrentz & Nigel Tonkin*

**KARARA**  
MINING LIMITED

*Horizon Heritage Management acknowledges and pays respect to the Widi Mob Traditional Owners and Elders past, present and emerging.*

## EXECUTIVE SUMMARY

### Brief

Horizon Heritage Management (Horizon Heritage) was engaged by Karara Mining Limited (KML) to undertake an Aboriginal Heritage Survey (Archaeological and Ethnographic Site Identification) of the Karara Iron Ore Mine (Karara) northern and southern expansion survey areas with the Widi Mob Traditional Owners. The scope of the works is to include archival research, a field investigation and reporting.

### Project Background

Karara Mining; located 200 km south-east of Geraldton in the Shire of Perenjori, Western Australia, Karara is the largest mining operation and the first major magnetite mine in the Mid-West. It produces a premium, high-grade concentrate product for export to steelmakers. With an expected life of 30+ years, it will underpin a long-term iron ore business and provide sustainable benefits to the regional community. The operation includes a large open pit mine, complex ore processing and beneficiation plant and significant infrastructure and logistics networks.

Karara Mining Ltd was established in 2007 through a joint venture between China's Ansteel Group – the Anshan Iron and Steel Group Corporation (52.16%) and Gindalbie Metals Limited (47.84%) to develop and operate the Karara mine. Karara produces a premium, high-grade (66-68% Fe) magnetite concentrate at a design production rate of 8 million tonnes per annum (Mtpa).

Numerous archaeological and ethnographic surveys have been completed at Karara over the last 15 years. In order to meet its commitment to Aboriginal Heritage, KML has sought input from the Widi Mob and Horizon Heritage in assessing the cultural values of the land underlying the two new northern and southern expansion survey areas. These works are within the land recognised as that of the Widi Mob Traditional Owners.

### Aboriginal Heritage Survey

The Aboriginal heritage survey was conducted from the 25<sup>th</sup> May to the 4<sup>th</sup> June, 2020. The survey team met at the Karara Village Camp west of Karara and travelled out on country daily to the survey areas where the survey team discussed the project details and examined the country underlying the project areas. This methodology was endorsed by the Widi Mob involved in this survey; William (Bill) Lewis, Kyra Lewis, Clayton Lewis, Carolyn Lewis, Jake Bykerk and Renee Pinkerton.

### Results

The Widi Mob and Horizon Heritage identified seven new sites/places; Karara South Granites 01, Karara South Granites 02, Karara South CMT and Karara South Gnamma Holes 1 through 4, within the southern expansion survey area. Three previously identified Other Heritage Places; DPLH 26489 MIOP11 (Karara North Artefacts 02), DPLH 26494 MIOP18 (Karara West Gnamma 02) and DPLH 26808 MIOP15 (Karara North Site Complex 01) also partially fall within the expansion survey areas.

## Conclusions

Horizon Heritage Management makes the following conclusions:

1. Aboriginal heritage site and places represent Australian history and it is important for current and future generations that they are conserved and protected.
2. The KML survey expansion areas are located wholly within land acknowledged under the *Native Title Act (1993)* as the Widi Mob. The Widi people are the custodians of this land.
3. The KML survey expansion areas are a culturally rich environment with clear indications that it has been utilised by Widi people in the past.
4. KML have completed their obligations under the *Aboriginal Heritage Act (1972)* and in line with the Widi Mob heritage agreement to assess the land for Aboriginal heritage sites or places that could be impacted upon by their proposed expansion activities.
5. The Widi Mob Traditional Owners and Horizon Heritage identified seven new heritage sites; Karara South Granites 01, Karara South Granites 02, Karara South CMT and Karara South Gnamma Holes 1 through 4, within the southern expansion survey area.
6. Three previously identified Other Heritage Places; DPLH 26489 MIOP11 (Karara North Artefacts 02), DPLH 26494 MIOP18 (Karara West Gnamma 02) and DPLH 26808 MIOP15 (Karara North Site Complex 01) also partially fall within the expansion survey areas.
7. The seven new heritage sites and three previously identified Other Heritage Places may be deemed as sites under section 5 of the AHA and should be avoided to prevent any breaches of Section 17 of the AHA.
8. DPLH 21374 KARARA/02 - Mt Karara has been determined as 'Not a Site' under Section 5 of the AHA. No cultural heritage management of this Other Heritage Place is required.
9. KML has a requirement to fulfil their obligations under the *Aboriginal Heritage Act (1972)* as an ongoing process.

## Recommendations

Horizon Heritage Management and the Widi Mob make the following recommendations:

1. KML endeavours to avoid the nine new and previously identified heritage sites and places; Karara South Granites 01, Karara South Granites 02, Karara South Gnamma Holes 1 through 4, DPLH 26489 MIOP11 (Karara North Artefacts 02), DPLH 26494 MIOP18 (Karara West Gnamma 02) and DPLH 26808 MIOP15 (Karara North Site Complex 01) located within the proposed expansion areas.
2. If KML is unable to avoid the nine new and previously identified heritage sites and places it must consult further with the Widi Mob Traditional Owners on any appropriate site management strategies in regards to mitigation, conservation, protection and any further research requirements under a Section 16 permit or Section 18 consent under the AHA.
3. KML is advised that the Widi Mob are satisfied to undertake salvage and relocation of newly identified heritage place Karara South CMT as an acceptable site management conservation and protection strategy.

4. KML as the custodian of heritage sites and places found on its tenements, should consider conducting physical audits of Aboriginal cultural heritage sites or places within their tenements with Widi Mob Traditional Owner involvement to identify any future preservation or conservation maintenance needs. Annual physical audits would allow KML and Widi Mob Traditional Owners to maintain and protect heritage assets on behalf of the wider community. Audits are beneficial to understand and plan for maintaining a heritage place or object.
5. KML should consider discussing at the next Widi Mob Liaison Committee meeting Aboriginal Cultural Awareness Training. This training fosters mutual respect and cultural understanding of Aboriginal people which underpins all aspects of the development of strong relationships with Traditional Owners.
6. The Widi Mob Traditional Owners have no issues with KML using existing historical exploration drill lines, tracks and pastoral tracks for access in the northern expansion survey area.
7. KML should advise the Widi Mob Traditional Owners of any modifications or updates to the proposed mine expansion works as explained during this survey.
8. In the instance of any previously unrecorded heritage sites or places being identified during the course of the expansion activities, KML must avoid the area and contact the Widi Mob Traditional Owners.
9. If human remains, skeletal materials that may be human or materials that may be a human grave, are uncovered within the cleared work area, KML and its contractors must stop work immediately and the materials and the area must be left undisturbed. The Widi Mob Traditional Owners and the Western Australian Police must be informed immediately.
10. KML keep the Widi Mob Traditional Owners informed of any further developments planned within their traditional country.
11. All KML staff and contracting personnel are made fully aware of their obligations under the *Aboriginal Heritage Act (1972)*.
12. If any doubts exist with the advice contained in this report KML should consult further with the Widi Mob Traditional Owners and or with the Department of Planning, Lands and Heritage.

## **Confidentiality**

No cultural information in this report was stated to be confidential or restricted.

## **Disclaimer**

This Aboriginal heritage survey does not constitute regulatory approval under the Western Australian *Aboriginal Heritage Act* (1972). Horizon Heritage Management is supplying independent heritage advice based on our expertise in Cultural Heritage Management, consultation and surveying with the Widi Mob Traditional Owners and interpretation of a review of the Register of Aboriginal Sites and the Aboriginal Heritage Inquiry System maintained by the Department of Planning, Lands and Heritage (DPLH). Horizon Heritage Management attempts to give voice to the Aboriginal people who take part in heritage surveys such as the one reported here, however, if any doubts exist with this heritage survey report or the advice herein contained KML should consult further with the Widi Mob and/or the DPLH.

## **Copyright**

This report is the property of Horizon Heritage Management. The copyright owner has given permission to KML to use the contents of the report. Ownership of the intellectual property rights of the information provided by the Widi Mob Native Title Claimants remains the property of those named claimants.

## **GPS Datum and Limitations**

The GPS datum used during this survey was WGS 84, utilising a handheld Garmin GPS map 62s. Whereas we endeavour to pinpoint geographical/site locations, the limitations of handheld GPS devices will create inaccuracies on occasion. Also, the potential for error from datum shift is ever present.

## **Acknowledgements**

Horizon Heritage Management acknowledges the assistance and input of KML staff (Greg Payne & Greg Oliver) and the input and participation of the Widi Mob Traditional Owners.

## **Abbreviations**

AHA	<i>Aboriginal Heritage Act</i> (1972)
AHIS	Aboriginal Heritage Inquiry System
DPLH	Department of Planning, Lands and Heritage
GPS	Global Positioning System
KML	Karara Mining Limited
OHP	Other Heritage Place

## **Horizon Heritage Management**

Damien Lafrentz  
Nigel Tonkin

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## **1 INTRODUCTION**

### **1.1 Brief**

Horizon Heritage Management was engaged by KML to undertake an Aboriginal Heritage Survey (Archaeological and Ethnographic Site Identification) of the Karara iron Ore Mine expansion survey areas with the Widi Mob. The scope of the works is to include archival research, a field investigation and reporting.

### **1.2 Project Scope**

#### **<sup>1</sup>Karara Mining Limited**

KML is undertaking long term mine planning at its Karara Iron Ore Mine;

- Heritage Survey Area North – 488 Ha
- Heritage Survey Area South – 600 Ha

KML wants to conduct a site identification heritage survey with the Widi Mob Traditional Owners. As KML are requesting a site identification survey methodology, they understand that if any Aboriginal sites are located, they will be recorded to detail for possible assessment under the AHA.

### **1.3 Survey Objectives**

In order to progress Karara expansion planning, KML requires an archaeological and ethnographic heritage survey to satisfy requirements under the AHA and to communicate development activities with the Widi Mob Traditional Owners.

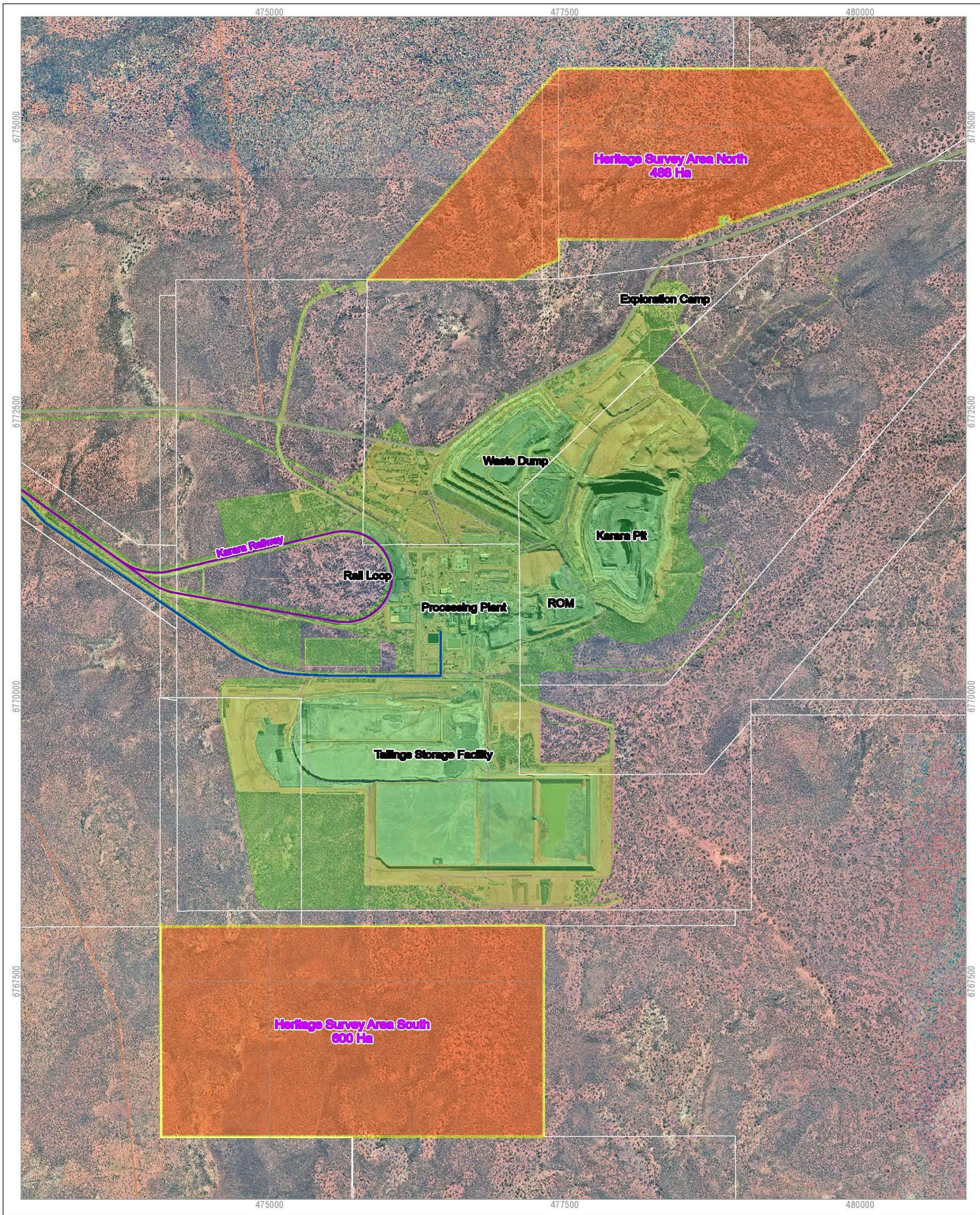
### **1.4 Proposed Survey Areas**

The full extent of the KML survey areas are shown in Map 1. The total survey area is approx. 1088 Ha. The survey areas are located within tenements; G59/46, G59/38 and E59/817-1.

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<sup>1</sup> Information supplied by KML dated 12 February 2020

Map 1: KML Heritage Survey Areas Map



26 November 2019  
 Version: B  
 Size: A3  
 K0024 F2

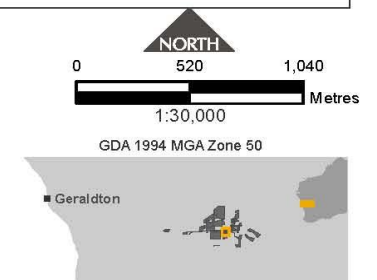
Long Term Mine Plan

**Proposed Heritage Survey Areas**

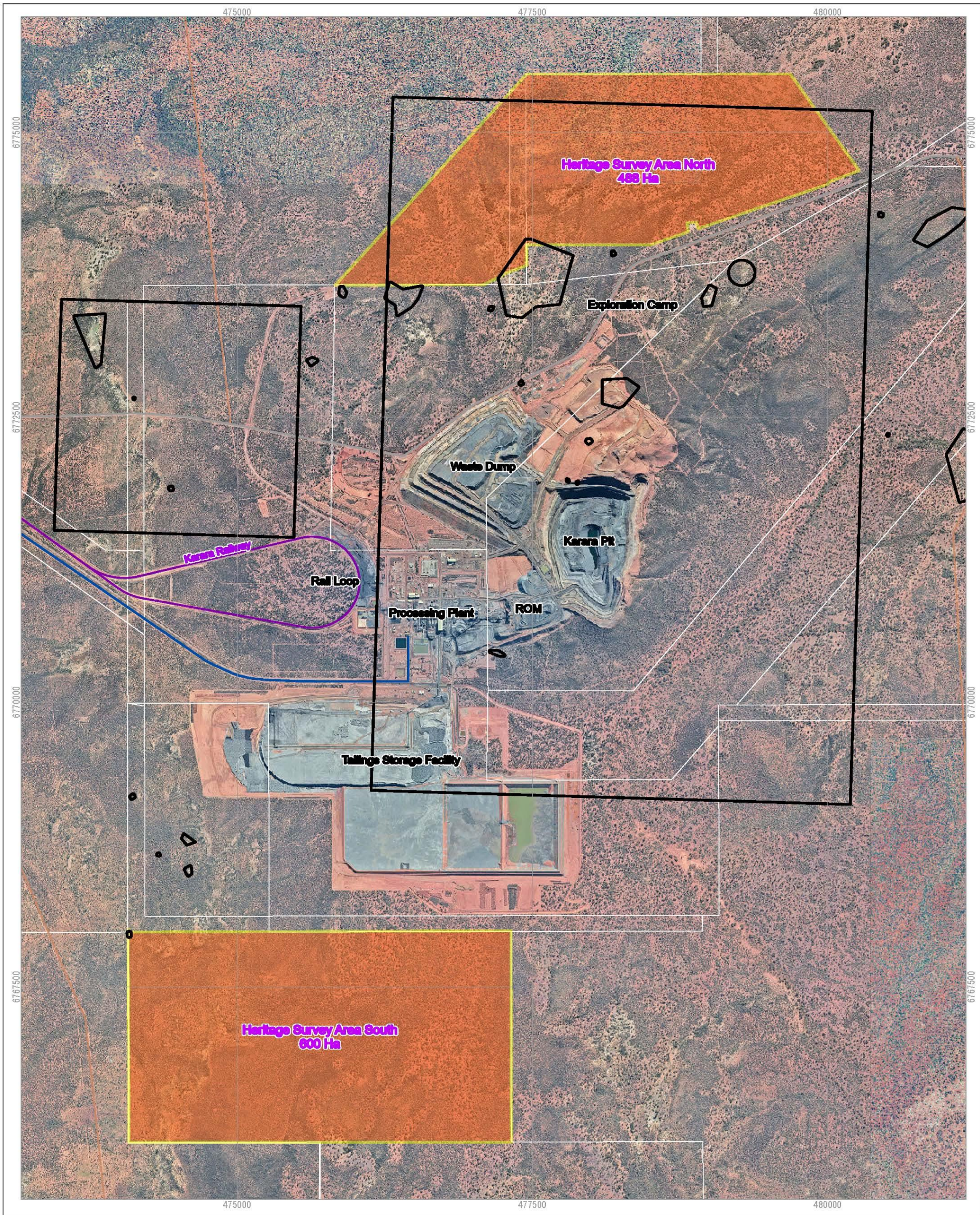


**Legend**

- Heritage Proposed Survey Area
- KML Tenements
- Approvals - Ground Disturbance Permits



Map 2: KML Heritage Survey Areas Map with DPLH layer



28 November 2019  
 Version: A  
 Size: A3  
 K0024 F4

Long Term Mine Plan  
**Proposed Heritage Survey Areas Constraints**  
**DAA-Heritage Sites**



**Legend**

- Heritage
- DAA-Heritage Sites
- Proposed Survey Areas
- Theme
- Heritage Proposed Survey Area
- KML Tenements

NORTH

0 600 1,200  
m

1:30,000  
GDA 1994 MGA Zone 50

## 2 ABORIGINAL HERITAGE ACT

### Aboriginal Heritage Legislation Requirements

The Western Australian *Aboriginal Heritage Act* (1972) (AHA) was enacted to ensure that Aboriginal heritage to which the AHA applies could be appropriately protected and preserved.

All Aboriginal sites of archaeological and ethnographic significance in Western Australia are protected by the AHA, whether or not they have previously been identified or registered, provided that the site can be determined to meet the Section 5 definitions of the AHA.

A land user is obliged to comply with the provisions of the AHA and failure to do so may result in prosecution. Section 17 of the AHA provides that it is an offence to excavate, destroy, damage, conceal or in any way alter an Aboriginal site. Therefore, land users should carefully evaluate how a proposed activity may affect Aboriginal heritage.

### Section 5

An Aboriginal Site means any place to which the *Aboriginal Heritage Act* (1972) applies by operation of Section 5 of the Act:

*(a) any place of importance and significance where persons of Aboriginal descent have, or appear to have, left any object, natural or artificial, used for, or made or adapted for use for, any purpose connected with the traditional cultural life of the Aboriginal people, past or present;*

*(b) any sacred, ritual or ceremonial site, which is of importance and special significance to persons of Aboriginal descent;*

*(c) any place which, in the opinion of the Committee, is or was associated with the Aboriginal people and which is of historical, anthropological, archaeological or ethnographical interest and should be preserved because of its importance and significance to the cultural heritage of the State;*

*(d) any place where objects to which this Act applies are traditionally stored, or to which, under the provisions of this Act, such objects have been taken or removed.*

### Section 17

Section 17 of the *Aboriginal Heritage Act* (1972) outlines offences relating to Aboriginal sites.

A person who -

(a) excavates, destroys, damages, conceals or in any way alters any Aboriginal site; or

(b) in any way alters, damages, removes, destroys, conceals, or who deals with in a manner not sanctioned by relevant custom, or assumes the possession, custody or control of, any object on or under an Aboriginal site;

(c) commits an offence unless he is acting with the authorisation of the Registrar under section 16 or the consent of the Minister under section 18.

### 3 METHODOLOGY OVERVIEW

In completing the brief, Horizon Heritage Management undertook the following steps:

1. **Desktop Research.** The DPLH Aboriginal Heritage Inquiry System (AHIS) is periodically updated and research results are current to this report only. KML provided Horizon Heritage with any available and relevant heritage reports.

See the Desktop Research Section of this report for details

2. **Aboriginal Heritage Site Identification Survey** which involved:

- Background research;
- Pre-consultation with Widi Mob and KML; and
- An Aboriginal heritage site identification survey of the KML survey areas with the Widi Mob.

See the Results Section of this report for details.

3. **Reporting** the results, including:

- The preparation of a draft report;
- The distribution of the draft report to the Widi Mob and KML for comments; and
- The submission of the final report to the Widi Mob and KML.

## 4 DESKTOP RESEARCH

A search of the DPLH Aboriginal Heritage Inquiry System (AHIS) was conducted on the 20<sup>th</sup> of February, 2020. This search was used to provide background information for the Aboriginal heritage survey. The research determined both the registered ethnographic and archaeological sites in and around the KML project areas and the nature and frequency of previous heritage surveys. In turn, the potential impact of the proposal upon these sites and the likelihood of identifying additional sites and heritage issues were assessed in preparation for the survey.

### 4.1 AHIS: Aboriginal Sites and Survey Report Results

#### Terminology

**Place ID / Site ID:** This a unique ID assigned by the DPLH to the place or site.

#### 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).

**Open:** No Restrictions - Availability of information (other than boundary) that the DPLH holds in relation to the place is not restricted in any way.

**Closed:** Restrictions - Some or all of the information that the DPLH holds in relation to the place is restricted if it is considered culturally sensitive. This information will only be made available if the DPLH receives written approval from the informants who provided the information.

#### DPLH REGISTERED SITES & OTHER HERITAGE PLACES

There are no DPLH registered Aboriginal sites and four Other Heritage Places (OHPs) within the KML overlapping the KML survey areas. Site descriptions are detailed below.

**Table 1: DPLH Other Heritage Place's**

DPLH SITE ID	SITE TYPE	STATUS	LOCATION
21374 KARARA/02 - Mt Karara (Women's Only Site)	Ceremonial, Mythological, Rockshelter, Meeting Place, Natural Feature, Ochre, Other: Isolated Artefacts	CLOSED Stored Data / Not a Site	Not available when location is restricted
26489 MIOP11 (Karara North Artefacts 02)	Artefacts / Scatter	Lodged / OPEN Not yet assessed under Section 5 of the AHA	476401mE 6773554mN Zone 50 [Reliable]

26494 MIOP18 (Karara West Gnamma 02)	Natural Feature, Water Source	Lodged / OPEN  Not yet assessed under Section 5 of the AHA	474087mE 6767961mN Zone 50 [Reliable]
26808 MIOP15 (Karara North Site Complex 01)	Artefacts / Scatter, Grinding Patches / Grooves, Quarry, Rockshelter, Arch Deposit, Camp, Natural Feature, Water Source	Lodged / OPEN  Not yet assessed under Section 5 of the AHA	477515mE 6773720mN Zone 50 [Reliable]

### DPLH 21374 KARARA/02 - Mt Karara

Mt Karara is a women's only Ceremonial site that played a ritual role in the cultural lives of Widi Aboriginal women. The ceremonial site located at the southern end of the hill (Mt Karara) is an initiation ground where women were taught and put through the law. The Widi Representatives consider this site of high importance and of special significance to their cultural heritage and ceremonial link with the past ritual and ceremonial lives of their ancestors. Ethnographic information collected during heritage surveys have indicated that this site is considered dangerous to men and is a place for women only.

Due to the culturally sensitive nature of this information and the site itself the Widi representatives are not prepared to divulge any further information about this site and any current information held at the DPLH has a restricted access to women only.

### DPLH 26489 MIOP 11 (Karara North Artefacts 02)

The site is a large artefact scatter spread over a large area with nodes of higher concentration. The site is located on a horseshoe shaped ridge with an incised valley and creek line running through the centre. The artefacts identified consist of a range of lithic materials but the vast majority (>80%) were constructed of quartz. The majority of artefacts were un-retouched flakes and few cores were present. The creek line is vegetated by open eucalypt woodland, while the ridgeline is dominated by thick mulga scrub. A small rock shelter is located on the ridgeline overlooking the creek. No artefacts were noted in direct association, nor was there a deposit present within the cave.

### DPLH 26808 MIOP 15 (Karara North Site Complex 01)

This site is an extensive area of resource exploitation and occupation focused around several rock shelters and water sources. The separate elements within the site were initially recorded individually and are described below. A total of three quartz quarries and associated artefact scatters, five gnamma holes and six rock shelters were identified within the boundaries of the site complex.

Eucalypts (York Gums) dominate the open flood ways around the creek lines and the ridge tops are heavily vegetated with acacia scrub. The creek line drains into a large lake approximately 3km to the north east.

The rock shelters occur on siltstone ridges and overlook a creek line slicing through the site. Many of the individual caves contain artefacts and soil deposits and the potential for intact sub-surface assemblages is high.

The five gnamma holes identified within the site boundaries were of varying size, ranging in volume from 3L to 27L. One of the larger gnamma holes of K8AFGH002 was covered by a large cap stone and was full to the brim with water at the time of surveying.

The exploited quartz stone sources were for the most part reduced outcrops with extensive scatters of artefactual and non-artefactual material spread around them. The quartz in these outcrops was generally of a low to moderate grade, tending towards blocky fracturing. It is unlikely that these outcrops were the targets of extensive reduction, rather exploited opportunistically as a matter of convenience. The locally occurring quartz was present in many of the rock shelters around the site.

A small amount of basalt, crystalline quartz, BIF, chert and silcrete artefacts not sourced from the immediate vicinity were also present within the caves and in the artefact scatters throughout the site. A single grindstone base was identified within the scatter initially recorded as K8LPQ001, in the north eastern corner of the site complex.

The area represents an area of intense occupation and resource exploitation, as evidenced by the extensive artefact scatters and rock shelters containing artefactual material. The site may represent a refuge area during milder summers, when water was still available late into the year, or perhaps a staging point for the exploitation of the lithic resources in nearby Mt Karara and the Blue Hills during the wet, winter months.

Much of the material represents a relatively intact and *in situ* record, though a combination of slope erosion and water movement has disturbed the artefacts above and along the creek line to some degree.

The potential for subsurface archaeological material within the rock shelters and the presence of charcoal seen eroding out of several of the caves raises the possibility of archaeological excavation as a means of adding further information to the understanding of this site. Even without subsurface testing, the significance of this site is high from an archaeological perspective and it should be granted protection under Section 5 (a) and (c) of the AHA.

#### **DPLH 26494 MIOP 18 (Karara West Gnamma 02)**

This site is a gnamma hole located on an extensive granite outcrop. A small amount of gloss was present on the eastern edge of the gnamma hole and a large, broken capstone is present in the hole. Several isolated quartz artefacts were identified in the surrounding area, but not at sufficient density or demonstrable association to be recorded as a scatter. This place has a low archaeological significance.

#### **DPLH HERITAGE SURVEY REPORTS**

There are fifteen heritage survey reports listed on the DPLH register related to the four OHPs. Seven of these heritage survey reports are elaborated on below.

**Table 2: DPLH Heritage Survey Reports**

REPORT ID	REPORT TITLE	REPORT AUTHORS
21057	Section 18 application under the Aboriginal Heritage Act (1972) to undertake exploration of tenements at Mt Karara WA	Hames Consultancy Group

21608	Report on an archaeological and ethnographic S18 consultation regarding a Proposed Drilling Operations Expansion at Mt Karara, WA	Australian Interaction Consultants
22367	Site identification survey of the proposed Gindalbie Metals Mungada Ridge Hematite Project, Minesite Layout and Haul Road WA	Australian Interaction Consultants
22522	Site Identification Survey Of The Proposed Gindalbie Metals Mt Karara Magnetite Project, WA	Australian Interaction Consultants
22598	Report on Site Identification Survey of Tilley Siding and a Proposed RC Drilling Programme on Midwest Corporation Ltd tenements near Blue Hills, WA	Australian Interaction Consultants
22706	Report on an archaeological survey of a proposed slurry pipeline between Mt. Gibson and Geraldton, Western Australia	Australian Interaction Consultants
22791	A report on a section 18 consultation and site avoidance survey at Mt Karara, East of Morawa, Western Australia	Australian Interaction Consultants
22817	Report on European & Aboriginal use and heritage significance of land along a proposed slurry pipeline route between Geraldton and Karara, Western Australia	Australian Interaction Consultants
22828	Report of an archaeological survey of the proposed Blue Hills haul road and Morawa rail siding	Glendenning, Wayne
22873	Section 18 Report for Proposed Magnetite Mine and Infrastructure at Mt Karara, East of Morawa, Western Australia	Australian Interaction Consultants
22897	Section 18 report for proposed Magnetite Mine and Infrastructure at Mt Karara, East of Morawa, Western Australia	Australian Interaction Consultants
23290	Karara and Mungarda Iron Ore Project: Lake Weelhamby Causeway to Karara	CAD Resources
23496	A report of an Ethnographic Survey of Karara Mining Limited's Karara Iron Ore Project and Mungada Iron Ore Project Proposed Linear Infrastructure Corridor with the Widi Binyardi NTC Group	Doulman, Tony
28153	Site Identification and Work Area Clearance Heritage Survey Report of the Karara Iron Ore Project Area at Karara, Western Australia : volume ii	Fordyce, Ben
28513	Consolidation Report of Proposed Iron Ore Exploration, Mining and Infrastructure in the Terapod and Blue Hills Areas near Morawa, Western Australia	Australian Interaction Consultants

### **HSR 21057**

*Hames Consultancy Group 2004, Section 18 application under the Aboriginal Heritage Act (1972) to undertake exploration of tenements at Mt Karara WA, prepared for Gindalbie Gold NL.*

This Section 18 report was prepared for Hames Consultancy Group by Australian Interaction Consultants for the proposed works on tenement E59/817 at Mount Karara. The report includes documents from the ethnographic and archaeological surveys conducted by AIC and identifies any Aboriginal sites that require a Section 18 in order to disturb the site.

### **HSR 21608**

*Australian Interaction Consultants 2005e, Report on an Archaeological and Ethnographic S18 Consultation regarding a proposed drilling operations expansion at Mt Karara, Western Australia, prepared for Gindalbie Metals Limited.*

This report is on an ethnographic and archaeological survey prepared by Australian Interaction Consultants with Widi Mob representatives for Gindalbie Metals Limited for proposed works within the Mt Karara and Syncline project areas. Seven previously recorded sites were identified in this report with one of them (Mt Karara DPLH 21374) being in the vicinity of the survey area. No new sites were identified in this report. Mt Karara (DPLH 21374) was confirmed to have important spiritual significance, especially towards the southern end which is culturally sensitive and towards the northern section of the project area where ochre and artefacts were located. A suggestion for an exclusion zone was determined. The Syncline area had no heritage concerns.

During the survey, 32 new archaeological sites, and no new ethnographic sites were identified. The archaeological sites were named MIOP1-MIOP32. These sites included artefact scatters, quarries, grind stone bases, gnamma holes and three site complexes.

### **HSR 22367**

*Australian Interaction Consultants, 2006, Site Identification Survey of the Proposed Gindalbie Metals Ridge Hematite Project, Minesite Layout and Haul Road Western Australia. Prepared for Gindalbie Metals Limited Australian Interaction Consultants.*

This report documents an archaeological and ethnographic survey of a proposed mining and infrastructure project for Gindalbie Metals Ltd at Mungada Ridge (Blue Hills) and an associated haul road from the minesite to Tilley Siding in Morawa. Adele Austin, Damien Lafrentz, Scott Chisholm and Chris Gotse of Australian Interaction Consultants completed the survey in July 2006 with the assistance of representatives of the Widi Mob Native Title Claimants.

During the course of the survey no new Aboriginal sites were recorded. Several points of interest were noted, and it was requested that these places were not impacted by the proposed development. These included an outcrop of rock that could potentially be a seasonal spring, two scar trees and evidence of an historical camp.

### **HSR 22522**

*Australian Interaction Consultants, 2007e, Site Identification Survey of the Proposed Gindalbie Metals Mt Karara Magnetite Project, Western Australia. Prepared for Gindalbie Metals Limited by Australian Interaction Consultants.*

This report documents a survey undertaken by Australian Interaction Consultants on behalf of Gindalbie Metals Ltd for their proposed expansion of mining and infrastructure. Ronald Parker, Adele Austin and Damien Lafrentz undertook the ethnographic survey of the area on August 31st 2006 with representatives of the Widi Mob Native Title Claimant Group. One new ethnographic site was identified, which was first found in 2005 and consists of a rock shelter with ochre source that has eroded into a creek bed. One grindstone and one glass quartz artefact were also located and it was suggested by the Traditional Owners that this region was walk through country.

Scott Chisholm and Chris Gotse undertook the archaeological survey on the 30th and 31st of August 2006, with the involvement of Widi Mob representatives. No new archaeological sites were found however three isolated flaked artefacts were located. A further documentation of Ochre Quarry Site 5934 was also completed at the request of the Widi Mob. This was considered to be an important site, and would not be affected by the Gindalbie development.

### **HSR 22598**

*Australian Interaction Consultants 2007c, Report on Site Identification Survey of Tilley Siding and a Proposed RC Drilling Program on Midwest Corporation Ltd tenements near Blue Hills, Western Australia, Prepared for Midwest Corporation Limited.*

This report outlines the findings of a site avoidance survey undertaken by Australian Interaction Consultants with Widi Mob representatives for Midwest Corporation Limited. The project involves RC commercial drilling in five tenements (M59/0596, E59/1059, E59/1175, E59/971 & M59/595) at the Blue Hills area near Morawa and Tilley Siding. The area covers approximately 30ha which is located at the intersection of the Yalgoo-Morawa Road and the Wubin-Mullewa Roads, just north of the Morawa town site.

Six previously recorded sites were identified in this report, none of which will be impacted by the proposed works. Three new ethnographic sites were found during the survey and should be avoided. They were a claypan/ephemeral lake, a gnamma hole with associated artefacts and an ironstone outcrop. Widi Mob object to three of the 81 drill hole sites for ethnographic reasons and another three drill hole sites which were found to have cultural material present. Tilley Siding was found to have no heritage concerns.

### **HSR 22706**

*Australian Interaction Consultants, 2005c, Report on an archaeological survey of a proposed slurry pipeline between Mt. Gibson and Geraldton, Western Australia. Australian Interaction Consultants.*

This report details an archaeological survey of a proposed slurry pipeline between Mt Gibson and Geraldton and 40km of associated water pipeline as commissioned by Mt Gibson Iron Limited. Claire Greer and Moss Wilson of Australian Interaction Consultants conducted the survey between May and July 2005.

The report identifies three new Aboriginal sites (of which two were added to the DIA register) and 184 previously recorded sites. The new sites included a marked tree at 475766mE 6731594mN, the Simpson Road Quarry at 389832mE 6746499mN and the Simpson Road Artefact Scatter at 385135mE 6746448mN. Five European Heritage sites were also recorded, these were recorded as Stone building, Smart family gravesite, Butler family gravesite, Stone Chimney and ruins and Rabbit Proof Fence No.1.

The report recommends all located sites be avoided if possible.

### **HSR 28153**

*Fordyce, B & Lafrentz, D 2009b, Volume II – Site Identification and Work Area Clearance Heritage Survey Report of the Karara Iron Ore Project at Karara, Western Australia. Prepared for Karara Metals Ltd by Ben Fordyce and Damien Lafrentz of Australian Interaction Consultants.*

This report details an archaeological and ethnographic survey conducted by Australian Interaction Consultants on behalf of Karara Metals Ltd for the proposed Karara Iron Ore Project. The survey took place with the involvement of members of the Widi Mob Native Title Claimants.

The ethnographic component of the survey was undertaken between 2006 and 2008. No new ethnographic sites were recorded during the survey however the importance of the Blue Hills, their spiritual importance and focal point for Aboriginal activities was reconfirmed.

The survey identified 19 new archaeological sites consisting of 10 artefact scatters, four quarries, two gnamma holes, one grinding patch, and two site complexes. These were named; MIOP01 – Karara Well Artefacts 01, MIOP10 – Karara North Artefacts 01, MIOP11 – Karara North Artefacts 02, MIOP12 – Karara West Artefacts 03, MIOP13 – Karara West Artefacts 02, MIOP14 – Karara West Grind base 01, MIOP15 – Karara North Site Complex 01, MIOP16 – Karara North Site Complex 02, MIOP17 – Karara West Gnamma 01, MIOP18 – Karara West Gnamma 02, MIOP19 – Karara West Artefacts 01, MIOP24 – Silverstone Artefacts 01, MIOP25 – Silverstone Artefacts 02, MIOP26 – Silverstone Artefacts 03, MIOP27 – Silverstone 04, MIOP28 – Silverstone Quarry 01, MIOP29 – Silverstone Quarry 02, MIOP30 – Silverstone Quarry 03 and MIOP31 – Silverstone Quarry 04. Further site details are contained in Volume III of the report.

### **HSR 28513**

*Australian Interaction Consultants 2010, Consolidation Report of Proposed Iron Ore Exploration, Mining and Infrastructure in the Terapod and Blue Hills Areas near Morawa, Western Australia, Prepared for Karara Mining Limited.*

Australian Interaction Consultants were commissioned by Karara Mining Limited to produce a consolidated report of eight surveys conducted between 2008 and 2010. The surveys were undertaken by AIC and Yamatji Communications for the purposes of a Section 18 application to disturb DIA 26485 MIOP08 (Terapod Artefacts 01) and DIA 28481 MIOP32 (Terapod Gnamma 01). Surveys were conducted from 2008-2009 in consultation with Widi Mob, West Badimia and Binyardi representatives. The AIC consulted with Widi mob whilst Yamatji communications consulted with West Badimia and Binyardi.

### **HSR AIC 2009**

*Fordyce, B & Lafrentz, D 2009a, Site Identification and Work Area Clearance Heritage Survey report of the Mungada Iron Ore Project Area at Karara, Western Australia. Prepared for Karara Metals Ltd by Ben Fordyce and Damien Lafrentz of Australian Interaction Consultants, May 2009.*

Australian Interaction Consultants (AIC) were engaged by Karara Mining Ltd to perform an Archaeological and Ethnographic Site Identification and Work Area Clearance Heritage Survey of the proposed Mungada Iron Ore Project area, in the vicinity of Blue Hills and Mt Karara. The ethnographic component of this survey was completed with the Widi Mob Native Title Claimants over numerous field trips between 2008 and 2009, whilst AIC representatives Ben Fordyce, Anna Fredriksson, Chris Gotse, Sarah Lewis, Deidre Lewis-Cook, Gavin McDevitt, Steve Novak, Lyndon

Patterson and Linda Villiers completed the archaeological component between 17th June and 21st November 2008.

## **DISCUSSION**

Previous heritage surveys within KML tenements have always followed a focused approach with surveys taking place within defined development footprints. There are a large number of previously recorded archaeological sites in KML tenements with overwhelming evidence for the exploitation of resources.

The majority of the sites in the area have been identified as artefact scatters, gnamma holes, granites and scar trees. These sites have been focussed around water availability, suggesting 'rain chasing' behaviour and the structured use of all available water sources (see Gould, 1980; and Veth 1989).

Late Holocene populations would most likely have obtained the majority of their water from areas where water was retained following heavy rains. This would have occurred in seepages around granite domes and other rocks, from occasional springs, rock pools, rock holes, claypans and from major lake systems when salinity was low (Bordes et al, 1983). This resource utilisation strategy is highly opportunistic, exploiting resources when they became available. It produces site patterning in which small numbers of large, complex archaeological sites occur near more permanent water sources and a greater number of sparser, smaller sites are associated with more ephemeral water sources. Special purpose sites, such as stone quarries, are generally located where these specific resources are available.

The majority of water sources within this part of the Mid West region are ephemeral and it is therefore expected that sparser, smaller archaeological sites are located near ephemeral water sources, such as the semi-permanent gnamma holes and drainage streams noted in several previous surveys. The location of transitional camp sites and some complexes, in this area is also consistent with these land use behaviours.

The region maintains a high potential for archaeological finds, which combined with the ethnographic significance of landforms in the Mt Karara and Blue Hills area, suggests rock shelters in the area maintain a potential for stratified archaeological material to be present.

## 5 ABORIGINAL STAKEHOLDER GROUP

### 5.1 Identification of Aboriginal Group

The existence of a native title claim or determination and or known heritage interests in an area, are seen as sufficient to establish an Aboriginal person’s ‘right to speak’ about heritage issues.

The table below outlines the Native Title group involved in this survey:

**Table 3: Aboriginal Group Identified for Consultation**

GROUP	NTC	CONTACT
Widi Mob	WC1997/072	MPS Law

The relevant Aboriginal people will nominate Aboriginal consultants from their group who provide first-hand knowledge and guidance about the Aboriginal heritage of the area.

The Widi Mob have a history of cooperatively participating in and undertaking heritage surveys under the *Aboriginal Heritage Act (1972)* for the purposes of proponents within their traditional lands.

Horizon Heritage was supplied the names and contact details of the Widi Mob survey representatives by Kathleen Pinkerton (Widi Mob heritage co-ordinator).

**Plate 1: Heritage survey team (29/05/2020)**



## 6 ABORIGINAL HERITAGE SURVEY

### 6.1 Heritage Survey Methodology

#### Survey Type

In the completion of this project, Horizon Heritage Management and the Widi Mob conducted a site identification Aboriginal heritage survey under the *Aboriginal Heritage Act (1972)* of the KML survey areas. This survey type was chosen to determine whether the proposed development will impact upon Aboriginal sites or places. The main objectives of the Ethnographic and Archaeological Aboriginal Heritage survey will be to:

- Identify any known or potential Aboriginal heritage issues that may affect the proposed development.
- Undertake consultation that may be required to meet the requirements of the *Aboriginal Heritage Act (1972)*.
- Locate and record Aboriginal sites and any other Aboriginal heritage issues.
- Make recommendations regarding the management of the above sites, including any further research and/or consultation that may be required.

#### Survey Methodology

The survey methodology was site identification with survey team members spaced between 15 – 25 m (the width varied for safety reasons, keeping visual contact in thick vegetation scrub areas) for parallel pedestrian transect intervals. The heritage consultants walked the outside transect boundary with Widi Mob Traditional Owners spaced out between the width of each transect. This systematic methodology allows the survey team to assess the land underlying the project areas for any heritage sites or places. The site recording method used during the survey aimed to record sufficient information to characterise each site and to enable an assessment to be made of the significance of each of the sites. GPS locations were recorded using a hand-held Garmin GPS 64 unit, affording a spatial accuracy of  $\pm 5\text{m}$ .

**Plate 2: Survey team assessing country**



## Site Types

On the basis of previous Archaeological surveys in the Karara area, a number of different types of Aboriginal sites were expected to be identified within the KML survey areas. Definitions of these sites are as follows:

- Artefact scatter; refers to locations where a range of activities have occurred, such as the manufacture and maintenance of tools and the processing of foods. These sites will often contain a wider range of lithic materials than quarries and knapping floors.
- Gnamma Hole / Water Source; is a natural or man-made rock cavity, which holds water after rain or can be linked to the ground water table.
- Culturally Modified Tree; refers to a tree, which has trunks and/or limbs that have been modified by the removal of bark and/or hard wood. Aboriginal people removed wood and bark for cultural material items such as bowls and shields and to access native honey inside the hollows of a tree.
- Quarry; a location from which stone used to manufacture stone artefacts has been sourced.
- Rock Art; refers to art placed on a rock surface that may be created by painting or drawing or as abrading or engraving processes.
- Rock Shelter; can be an overhang, cave or breakaway which contains evidence of human occupation in the form of stone artefacts, charcoal, faunal material or rock art.

A distinction is often drawn between relatively dense, localised concentrations of cultural material and the sparsely distributed archaeological materials which usually surround them. The relatively sparse scatter of stone artefacts is usually known as a background scatter or isolated artefacts, while concentrations of artefacts are termed sites or places.

**Plate 3: Widi Country**



## Information Collection

Heritage ethnographic and archaeological information was gathered using group discussion. All information was noted according to the wishes of the Widi Mob involved and cultural and confidentiality protocols were adhered to. All information was recorded by notebook, GPS and/or camera. The results were confirmed with the Widi Mob at the end of the survey.

The following table outlines the progression of the survey and the participants:

**Table 4: Heritage Survey Progress**

DATES	WIDI MOB TRADITIONAL OWNERS	HORIZON HERITAGE MANAGEMENT	KML
25 <sup>st</sup> May to 4 <sup>th</sup> June 2020	Bill Lewis Kyra Lewis Clayton Lewis Carolyn Lewis Renee Pinkerton Jake Bykerk	Damien Lafrentz Nigel Tonkin	Greg Payne Greg Oliver

**Plate 4: Active Malleefowl nest found in survey area**



## 6.2 Site Identification Survey

The ethnographic and archaeological site identification survey was conducted from the 25<sup>th</sup> May to the 4<sup>th</sup> of June 2020. The project areas in its present and historical context were discussed with the Widi Mob and any perceived or potential impacts to heritage site or places and cultural values was noted.

The Widi Mob and Horizon Heritage identified seven new heritage sites; Karara South Granites 01, Karara South Granites 02, Karara South CMT and Karara South Gnamma holes 1 through 4, within

the southern expansion survey area. Three previously identified Other Heritage Places; DPLH 26489 MIOP11 (Karara North Artefacts 02), DPLH 26494 MIOP18 (Karara West Gnamma 02) and DPLH 26808 MIOP15 (Karara North Site Complex 01) also partially fall within the expansion survey areas. The Widi Mob wants KML to avoid these ten heritage sites/places from expansion activities.

**Table 5: KML Heritage Survey Results New Sites**

SITE ID	SITE TYPE	LOCATION
Karara South Granites 01	Camp, Water Source, Grinding, Gnamma Holes, Artefacts / Scatter	KML Heritage Survey Area South
Karara South Granites 02	Camp, Water Source, Grinding, Gnamma Holes, Artefacts / Scatter	KML Heritage Survey Area South
Karara South CMT	Culturally Modified Tree	KML Heritage Survey Area South
Karara South Gnamma Hole 1	Water Source, Natural Feature	KML Heritage Survey Area South
Karara South Gnamma Hole 2	Water Source, Natural Feature	KML Heritage Survey Area South
Karara South Gnamma Hole 3	Water Source, Natural Feature	KML Heritage Survey Area South
Karara South Gnamma Hole 4	Water Source, Natural Feature	KML Heritage Survey Area South

**Table 6: Previously identified DPLH Other Heritage Places**

DPLH SITE ID	SITE TYPE	STATUS	LOCATION
26489 MIOP11 (Karara North Artefacts 02)	Artefacts / Scatter	Lodged	476401mE 6773554mN Zone 50 [Reliable]
26494 MIOP18 (Karara West Gnamma 02)	Natural Feature, Water Source	Lodged	474087mE 6767961mN Zone 50 [Reliable]
26808 MIOP15 (Karara North Site Complex 01)	Artefacts / Scatter, Grinding Patches / Grooves, Quarry, Rockshelter, Arch Deposit, Camp, Natural Feature, Water Source	Lodged	477515mE 6773720mN Zone 50 [Reliable]

### 6.3 Karara South Culturally Modified Tree

Table 7: Karara South Culturally Modified Tree

SITE ID	KARARA SOUTH CULTURALLY MODIFIED TREE
Site Type	Scar Tree
Central Coordinate Easting	478512
Central Coordinate Northing	6775462
Projection	GDA94
Zone	50
Site Dimensions	50 m radial buffer
Archaeological Significance	Moderate

Karara South Culturally Modified Tree (CMT) is located within the KML heritage survey area south (see Map 3). The site was recorded by Horizon Heritage in co-operation with the Widi Mob Traditional Owners in June 2020.

#### KARARA SOUTH CULTURALLY MODIFIED TREE

##### Location of Karara South CMT

Karara South CMT is a single scarred tree located within the survey area south on the tall woodland flats. The area is very vegetated with by tall open woodland Tree Mallee of *Eucalyptus ebbanoensis* subsp. *ebbanoensis* over a Tall Open Shrubland to Tall Open Scrub of *Acacia acuminata*, *Acacia exocarpoides*, *Acacia tetragonophylla*, *Hakea preissii* and *Melaleuca filifolia* with scattered *Allocasuarina huegeliana* over a herbland dominated by *Ptilotus obovatus* var. *obovatus*. As well as grevillia (*Grevillia Intregrifolia*, *Grevillia Paradoxa*) and acacia (*Acacia assimilis* subsp. *Assimilis*, and *Eromophila*) scrubland with small scattered eucalyptus trees (*Eucalyptus leptapoda*) (Grien and Scheltema (eds), 2004).

At the time of recording, no identifiable water sources were found within the immediate vicinity of the site, however, several seasonal gnamma holes were identified at nearby recorded sites Karara South Granites 01 and Karara South Granites 02.

The site has no disturbance however the tree is no longer living and is absent of foliage. As such, Karara South CMT is in moderate condition.

**Plate 5: Karara South CMT with D Lafrentz**



### **Archaeological Site Recording Method**

Karara South CMT was recorded to a site identification standard. To identify the site boundary, the archaeologist and Widi Mob representatives discussed and agreed how to delineate the boundary perimeter. A single waypoint, the extent of the tree trunk, was recorded using a Garmin GPS Map 64 plus a 50 m buffer was added to determine the final site boundary.

### **Site Description**

Karara South CMT is a culturally modified tree (scar tree). The modification is the removal of a section of bark from a Eucalyptus (spp. Unknown, but possibly a York Gum) with a single scar. The size of the tree is approximately 5 - 6m (H) with a canopy absent of foliage of approximately 2 - 5m. The tree trunk is in moderate condition though dead at the time of recording.

### **Objects in Relation to Section 6 of the *Aboriginal Heritage Act***

The single scar at Karara South CMT is on the north side of the tree and has an aspect of 0°. The base of the scar is 870mm (87cm) from the ground and the girth of the tree is ~1210mm (121cm,

at scar). The height of the scar is 450mm (45cm), with a width at the centre of scar measuring 50mm (5cm) and thickness of overgrowth 80mm (8cm). The scar is positioned at waist height or shoulder height whilst seated, the heartwood is absent.

**How the purpose of the objects is connected with the traditional cultural life of the Aboriginal peoples past or present**

Given the size and shape of the scar, it was considered at the time of recording that the bark removal was most likely for the manufacture of a *Yandi* or *Coolamon* rather than a shield or spear thrower (*woomera*).

The scar tree is the result of the manufacture of a cultural item utilised by Aboriginal people who lived in the area in the past. The *coolamon* dish manufactured at Karara South CMT was likely used in the everyday life of the Aboriginal inhabitants of the region. The *coolamon* dish is a highly functional item with a degree of versatility in uses that relate to the everyday practices of traditional cultural life of the Aboriginal people in the present as they provide a tangible link to their cultural heritage (Davidson, *n. d.*).

**Plate 6: Karara South CMT width detail**



## **IMPORTANCE AND SIGNIFICANCE**

### **To whom is the Place of Importance and Significance?**

Karara South CMT is of importance and significance to the Widi people. The scarred tree at the site has the potential to provide information regarding site and landscape use in the Midwest region, as well as tool manufacture methods; therefore, it is potentially of importance and significance to the wider community.

The Widi Mob described the tree as tangible evidence of their ancestors using resources found on their traditional lands. They are aware of past Widi people removing bark from hardwood trees (like mallee) to create a likely carrying implement generally known as a *coolamon*. From the size of the scar they determined this to be a shallow vessel with curved sides. *Coolamons* are well-known to contemporary Widi people and were used by their ancestor Widi people to help carry water, seeds and or nuts and possibly in time of ceremony ochre.

### **Intactness and Condition of the Place and Objects**

Whilst the tree is no longer living, the main trunk has not sufficiently deteriorated at Karara South CMT. As a consequence of the natural deterioration Karara South CMT is considered to have a moderate to good intactness and condition rating.

### **Temporal Context**

The scar present at Karara South CMT does not provide an inferred level of temporal context. Whilst the tree itself is no longer alive, expert analysis of the age of the tree relating to species identification, size and the estimated rate of deterioration may provide an insight into the timing of the potential period of modification of the tree.

### **The Complexity and Diversity of the Objects**

There is little variation in the scar at and almost no variation, as a result there is a low-level complexity and diversity to the Karara South CMT site.

### **Relationship between the Objects and the Place**

Karara South CMT is a culturally modified tree (scar tree) in which a section of bark has been removed to be used as a functional item, most likely a receptacle used for the transportation of goods. Given the size and shape of the scar, it was considered at the time of recording that the bark removal was for the manufacture of a Yandi or Coolamon.

### **Context and Relationship of the Place to Other Places**

In comparing Karara South CMT with other sites recorded in the surrounding survey area, the place is within close proximity (approx. 1km) to Karara South Granites 01 and Karara South Granites 02. Karara South CMT is therefore considered to be part of a wider densely populated landscape highlighting patterns and movement of people across the landscape.

### **Rarity and Uniqueness of the Place/Objects**

In comparing Karara South CMT within a regional context, it is neither rare nor unique. Examples of open scar trees are commonly found both within the immediate landscape and broader region. As such, the site has a low rarity and uniqueness rating.

**Plate 7: Karara South CMT length detail**



### **Contribution to Research**

Despite insights provided regarding resource exploitation, it is unlikely that Karara South CMT will provide significant information relating to the understanding of Aboriginal people and their utilisation of the natural environment. However, it is possible that this place, when considered in context with other places, may inform patterns of movement and occupation across the wider landscape.

More specifically we suggest that the assemblage at Karara South CMT can contribute to research in the following ways:

- By contributing to evidence about temporal and/or cultural relationships between Karara South CMT and those sites within the wider Karara area;
- By contributing to the research and assessment of the variability of artefact types within assemblages to determine whether a definitive link exists between cultural modification characteristics and site function; and
- By contributing to research into patterning within sites across the Midwest region, to determine whether Karara South CMT supports our understanding of settlement models of Australia and the arid-zones as set out by Veth (1987, 1989).

Plate 8: Widi Mob Traditional Owners at Karara South CMT



### Summary of Importance and Significance

From both a local and regional context, Karara South CMT is considered to be of *low* archaeological significance. The site is in moderate condition because of the natural decay of the dead tree at the time of recording, but it can potentially contribute a small amount of information to the understanding of Aboriginal people and their utilisation of the surrounding landscape. Karara South CMT is an archaeological site; which in the opinion of the authors could constitute an Aboriginal site under section 5 (a) of the AHA.

While no specific cultural information was forthcoming from the Widi Mob Traditional Owners present during the site recording. KML is advised that the Widi Mob are satisfied to undertake salvage and relocation of newly identified heritage place Karara South CMT as an acceptable site management conservation and protection strategy. KML have indicated that they are supportive of this site mitigation strategy for Karara South CMT.

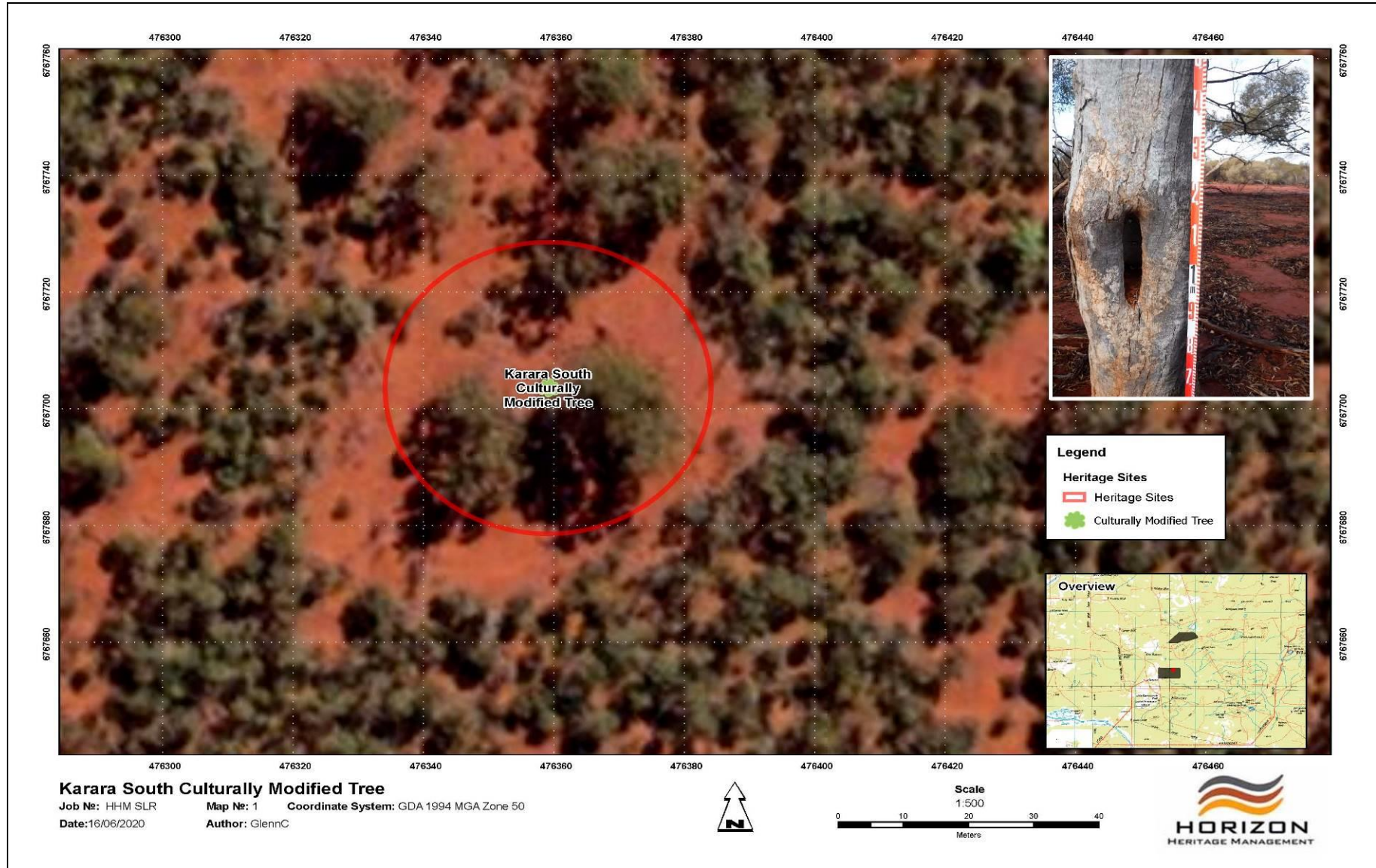
Table 8: Karara South CMT Significance assessment

Measure of Significance	Minimal	Low	Medium	High
Cultural	No information	Non-specific importance	Specific importance	High / Restricted
Regional	Local	Regional	State	National
Uniqueness	Common	Uncommon	Rare	Unique
Scientific	None	Some interest to CRM	Some academic research potential	High research potential
Integrity	Heavily disturbed	Some <i>in situ</i> material	Mostly <i>in situ</i> material	No disturbance

## **MANAGEMENT OF THE SITE**

- It is the preference of the Widi Mob that KML protects all Aboriginal heritage sites in situ. However, if future disturbance to Karara South CMT is unavoidable, then KML should discuss site mitigation requirements with the Widi Mob.
- If damage or disturbance to this tree cannot be avoided, then the Widi Mob Traditional Owners have requested the opportunity to conduct salvage and relocation (to a place of their choosing) of Karara South CMT to ensure the preservation of the CMT, and to enable maximum information to be gained from the site.
- KML ensures its employees and contractors (as appropriate) are advised of the existence and location of Aboriginal archaeological site Karara South CMT;
- This location may be deemed a site under section 5 (a) by the ACMC and should be avoided to avoid any breaches of Section 17 of the AHA;

### Map 3: Karara South Culturally Modified Tree



## 6.4 Karara South Granites 01

**Table 9: Karara South Granites 01**

SITE ID	KARARA SOUTH GRANITES 01
Site Types	Camp, Water Source, Artefact Scatter, Grindstone, Grinding Patch, Gnamma holes, Natural Feature
Central Coordinate Easting	474870
Central Coordinate Northing	6767148
Projection	GDA94
Zone	50
Site Dimensions (N-S x E-W)	375 m x 125 m
Archaeological Significance	Moderate

Karara South Granites 01 is located within the KML heritage survey area south (see Map 4). The site was recorded by Horizon Heritage in co-operation with the Widi Mob Traditional Owners in June 2020.

**Plate 9: Karara South Granites 01 view north-west**



## KARARA SOUTH GRANITES 01

### Location of Karara South Granites 01

Karara South Granites 01 is a moderate-density artefact scatter located within and across a granite ridgeline that runs south to north and is bordered to the north, east and southwest. The slope of the ridge is approximately 5°- 10°. The granite outcrop is very sparsely vegetated with seasonal plants (unknown sp.) and is surrounded by tall open woodland Tree Mallee of *Eucalyptus ebbanoensis* subsp. *ebbanoensis* over a Tall Open Shrubland to Tall Open Scrub of *Acacia acuminata*, *Acacia exocarpoides*, *Acacia tetragonophylla*, *Hakea preissii* and *Melaleuca filifolia* with scattered *Allocasuarina huegeliana* over a herbland dominated by *Ptilotus obovatus* var. *obovatus*. As well as grevillia (*Grevillia Intregrifolia*, *Grevillia Paradoxa*) and acacia (*Acacia assimilis* subsp. *Assimilis*, and *Eromophilia*) scrubland with small scattered eucalyptus trees (*Eucalyptus leptapoda*) (Grien and Scheltema (eds), 2004).

A few areas of sediment deposits are interspersed throughout the granite bedrocks, which consists of granite gravels overlaying silt and sand sediment. At the time of recording, several small water holes likely to hold quantities of water <200lt in rock holes throughout the wetter periods was located in the south and north sections of the site; however, the primary water source at the site appears to be a large gnamma hole with stone capping and two small gnamma holes with stone capping.

The site has limited disturbance with artefacts generally *in-situ* except for minor displacement because of seasonal rainfall and downslope movement. As such, Karara South Granites 1 is in moderate condition.

### Archaeological Site Recording Method

Karara South Granites 01 was recorded to a site identification standard. During the recording of the site, the boundary was redefined based on the decline in artefact density and the areas of disturbance. To identify the site, the archaeologist and Widi representatives walked the boundary defining the perimeter. The boundary was recorded using a Garmin GPS Map 64.

Artefact attributes were recorded at the area within the site featuring the highest densities of artefacts. Observational analytical information was recorded to provide an assessment of the lithic assemblage. The location for individual site features (such as grindstones and gnamma holes) were noted and used to create the site map (Map 4).

### Site Description

Karara South Granites 01 is a low-density artefact assemblage consisting of quartz, crystal quartz, mudstone, chert, and BIF artefacts. It consists of several moderate density cluster of artefacts along the eastern edge of the site, surrounded by a sparser background artefact scatter. Maximum artefact density was approximately 4/m<sup>2</sup>. The maximum dimensions of the site are 375 metres from north to south at its widest point and 125 metres from east to west. No clear source of the flaked material was located within the site boundary, which implies that the material was transported to the site from several potential sources within the survey area, particularly to the south. This artefact scatter represents an activity centre where past Widi people likely used this place as a seasonal short term camp site where a range of day to day tasks were conducted.

**Plate 10: Survey team inspecting Karara South Granites 01****Objects in Relation to Section 6 of the *Aboriginal Heritage Act***

It is estimated that there are approximately 70-120 artefacts Karara South Granites 1. Most of the assemblage is composed of locally sourced Quartz (95%); other material identified included BIF, mudstone, crystal quartz and chert (combined at 5%). It is estimated that 50% of the artefacts were flakes (45% tertiary, 40% secondary, 5% primary) with 50% debitage, and were predominantly complete. Several flakes exhibit signs of usewear. Whilst one Basalt single platform core was identified, no formal tools or hammer stones were found at the site. The maximum artefact density ( $4/m^2$ ) was recorded within the main concentration, while over the rest of the site, the density was low, averaging at  $1/m^2$ .

**How the purpose of the objects is connected with the traditional cultural life of the Aboriginal peoples past or present**

Karara South Granites 01 appears to be a short-term habitation place where water management/procurement, tool manufacture and food processing has taken place. The objects present at site are debitage resulting from the manufacture of these tools by Aboriginal people who lived in the area in the past. The tools that were manufactured at Karara South Granites 01 were likely used in the every-day life of the Aboriginal inhabitants of the region. The cultural material found at this site is consistent with other recorded activity nodes around granites in this area. By linking the activity nodes and sites we can glimpse the broader cultural landscape use of past Aboriginal people.

Whilst grindstones in the Australian landscape were primarily used for food processing (see Fullagar 2007), more recent techniques of residue analysis have provided greater taxonomic identification of plant materials, as well as expanding our understanding of plant processing, woodworking/processing, animal processing, and mixed grinding activities (plant and animal) (Stephenson 2013).

The artefacts relate to the traditional cultural life of the Aboriginal people in the present as they provide a tangible link to their cultural heritage. The gnamma holes with cap stone lids at the site indicate water preservation techniques for potential revisitation.

**Plate 11: Crystal quartz flake at Karara South Granites 01**



## IMPORTANCE AND SIGNIFICANCE

### To whom is the Place of Importance and Significance?

Karara South Granites 01 is of importance and significance to the Widi people. The artefact assemblage at the site has the potential to provide information regarding site and landscape use in the Midwest, as well as tool manufacture methods; therefore, it is potentially of importance and significance to the wider community.

The Widi Mob described Karara South Granites 01 as tangible evidence of their ancestors using resources found on their traditional lands. The water found within and on top of this granite natural feature would be seasonally available and the artefacts noted here is the physical evidence that Widi people in the past have used this feature.

The contemporary Widi Mob described this place as a seasonal camp located within a transitional zone (where people travelled from one resource to another). They considered that this would be an ideal camp spot for travelling to and from Mt Karara (women's site) in the cooler winter months. The artefacts identified at the place were thought to be associated with past Widi people utilising this ephemeral water source while travelling through country or undertaking hunting activities.

They also noted the prevalence of Emu and Malleefowl in the area which would have made for a meat (food) resource and at the right time of year eggs would be available. They acknowledged that there was limited evidence of sustained activity at this site but it is clearly a place past Widi people used. A Widi Mob member commented; *'Our people cruised around country going where we had to go, knowing how to get there' and 'being at a certain place at a certain time'*.

They noted that the granite feature is found near to the top of a ridge and would be a good spot for seasonal rain water to accumulate in rock pools or gnamma holes. The granites are a good source of fresh water for a period of time post rainfall events. The gnamma holes with cap stone lids at the site suggest past Widi people knew about and revisited and reused the gnamma holes.

One Widi Elder stated; *'They knew about this place, they came here and passed on information (location and resources) about this place'*. Another said; *'It is important to find these places and recreate the story'*. They went on to say *'the cap stones show our people maintained country'*.

**Plate 12: Sample of Artefact (Single Platform Core) Karara South Granites 1 (ventral view)**



### **Intactness and Condition of the Place and Objects**

The artefacts at Karara South Granites 01 are in moderate condition. There appears to be some displacement of the material, which can be moved by sheet wash during heavy rain. At the time of recording, some evidence of this seasonal wash activity was noted across the site, with several objects partially obscured by fine silt sediment. Significant disturbance has encroached on some peripheral areas of the site; however, the integrity of the main artefact concentration has not been significantly impacted by these disturbances. As a consequence of the natural and cultural disturbance to the site, Karara South Granites 01 is considered to have a moderate to good intactness and condition rating.

### **Temporal Context**

The artefacts present at Karara South Granites 01 do not provide evidence of temporal context, as no formal tool types were identified to provide any indication to a time period for occupation. However, the lower grindstone fragment may provide some relative or a broad range temporal context for the site. Seed grinding technologies have been recognised as indicative of desert life around 3,500 BP (to 100BP), indicating an increased reliance on grass seeds during this time (Smith 1986, 1996).

**Plate 13: Lower Grindstone Fragment (Millstone) identified at Karara South Granites 01**



### **The Complexity and Diversity of the Objects**

Owing to the minimal typological variation of the objects, raw material and absence of formal tools, Karara South Granites 01 is attributed a low complexity and diversity value. However, when considering the complexity of tool types, grinding stones are limited to lithology and usability (i.e., can the item be handled easily and is the surface both stable and coarse enough). Looking at diversity, the range of variation of use wear and polish evident on the individual abraded surfaces may be indicative of varying function, as well as whether the item has had limited or heavy use. However, without the benefit of a more detailed analysis utilising biochemical staining (see Stephenson 2013) the complete range of use uses can only be guessed at.

**Plate 14: Grinding Patch identified at Karara South Granites 01**



### Relationship between the Objects and the Place

Karara South Granites 01 is a low-density artefact assemblage manufactured from locally sourced quartz, crystal quartz, mudstone, chert, and BIF. The absence of typological variability within the assemblage suggests that minimal artefact preparation or production took place at this site. The relationship between object and place exhibited at Karara South Granites 01, is one that is reoccurring across the Midwest. The site is positioned on a mid-elevation granite exposure with moderate views over the surrounding hills and would have included Mt Karara. Owing to minimal variation in material and typology of artefacts coupled with the extensive disturbance evident at the site, it is difficult to form any solid conclusions regarding intra-site patterning at Karara South Granites 01.

### Context and Relationship of the Place to Other Places

In comparing Karara South Granites 01 with other sites recorded in the surrounding survey area, the place is within close proximity to Karara South Granites 02 and Karara South CMT. Karara South Granites 01 is therefore considered to be part of a wider densely populated landscape highlighting patterns and movement of people across the landscape.

### Rarity and Uniqueness of the Place/Objects

In comparing Karara South Granites 01 within a regional context, it is neither rare nor unique. Examples of open low-density artefact assemblages are also found both within the immediate landscape and broader region. The number, raw materials, and types of artefacts present at Karara South Granites 01 further supports this determination, as they are found in lithic assemblages both in the Karara Mining Lease and the broader Midwest region. As such, the site has a low - moderate rarity and uniqueness rating.

**Table 10: Karara South Granites 01 Significance assessment**

Measure of Significance	Minimal	Low	Medium	High
Cultural	No information	Non-specific importance	Specific importance	High / Restricted
Regional	Local	Regional	State	National
Uniqueness	Common	Uncommon	Rare	Unique
Scientific	None	Some interest to CRM	Some academic research potential	High research potential
Integrity	Heavily disturbed	Some <i>in situ</i> material	Mostly <i>in situ</i> material	No disturbance

### Contribution to Research

Although it is unlikely that Karara South Granites 01 will provide significant information relating to the understanding of Aboriginal people and their utilisation of the natural environment, it is possible that this place, if subjected to systematic salvage and detailed analysis of materials and then considered in context with other places, may inform patterns of movement and occupation across the wider landscape.

More specifically we suggest that the assemblage at Karara South Granites 01 can contribute to research in the following ways:

- Research and assessment of the variability of artefact types within assemblages to determine whether a definitive link exists between assemblage characteristics and site function (Brown 1987; Veth 1993).
- Contribute to research into patterning within sites across the Midwest region, to determine whether Karara South Granites 01 supports our understanding of settlement models of Australia and the arid-zones as set out by Veth (1987; 1989).
- Contribute and support research conducted by Ryan and Morse (2009) into reduction sequences and variation within assemblages to discern any visible patterns or trends in artefact production.

**Plate 15: BIF artefacts at Karara South Granites 01**



### **Summary of Importance and Significance**

From both a local and regional context, Karara South Granites 01 is considered to be of *low* to moderate archaeological significance. The site is in moderate condition because of the noted disturbances at the time of recording, but it can potentially contribute a small amount of information to the understanding of Aboriginal people and their utilisation of the surrounding landscape. Karara South Granites 01 is an archaeological site; which in the opinion of the authors could constitute an Aboriginal site under section 5 (a) of the AHA.

The Widi Mob Traditional Owners consider that all sites, regardless of their significance, require protection through registration under the AHA and avoidance from impact by developers, as they are evidence of their connection to country and to do otherwise would undermine their role as custodians of the land. KML have indicated that they can avoid Karara South Granites 01.

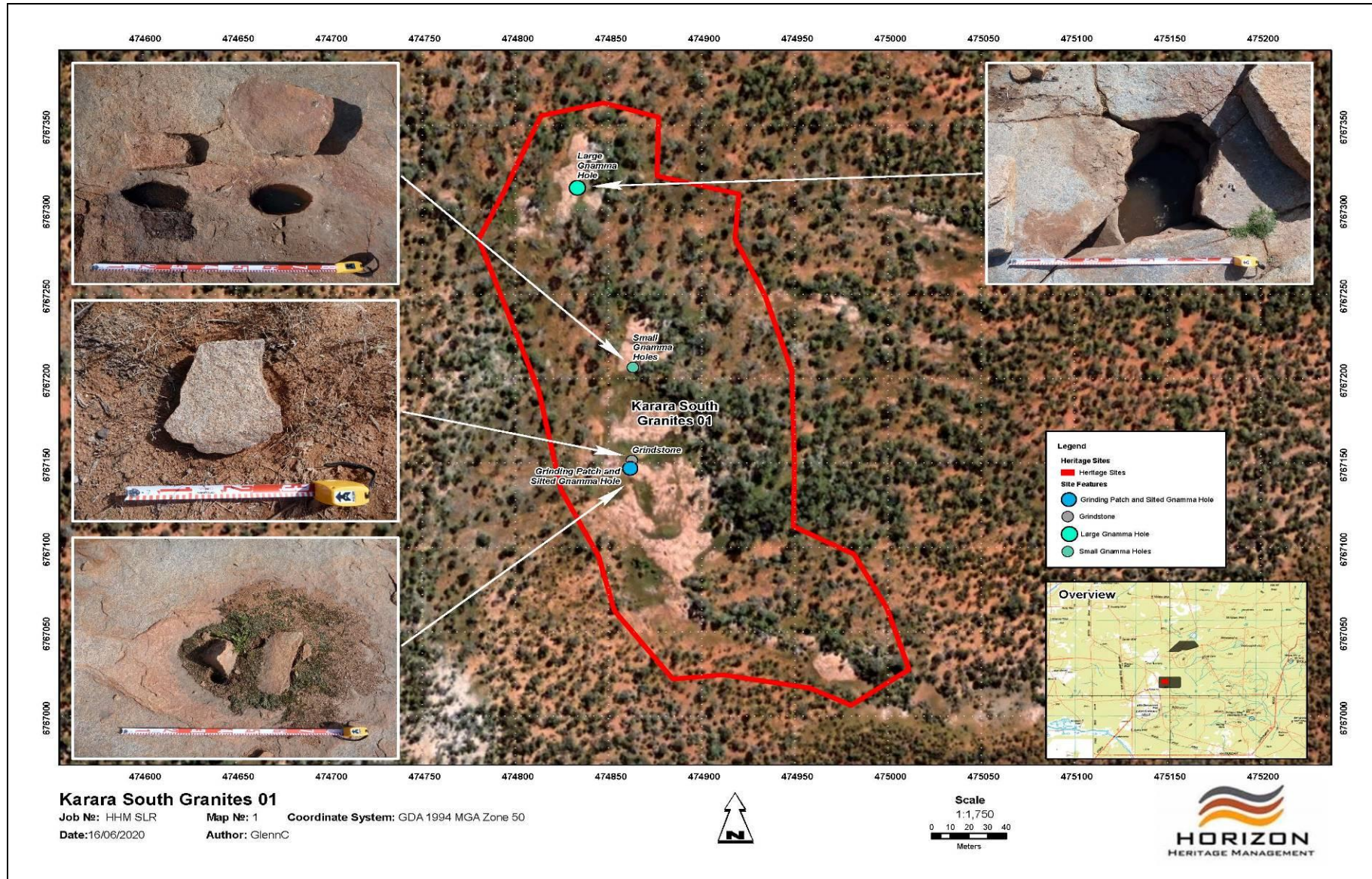
**Plate 16: Survey team discussion at Karara South Granites 01**



#### **MANAGEMENT OF THE SITE**

- It is the preference of the Widi Mob that KML protects Karara South Granites 01 Aboriginal heritage site in situ. However, if future disturbance to Karara South Granites 01 is unavoidable, then KML should discuss any requirement for Section 18 consent under the AHA with the Widi Mob.
- KML ensures its employees and contractors (as appropriate) are advised of the existence and location of Aboriginal archaeological site Karara South Granites 01;
- This location may be deemed a site under section 5 (a) by the ACMC and should be avoided to avoid any breaches of Section 17 of the AHA;
- If damage or disturbance to this site cannot be avoided, then the Widi Mob Traditional Owners have requested the opportunity to conduct surface salvage of Karara South Granites 01 to ensure the protection of objects, and to enable maximum information to be gained from the site.

### Map 4: Karara South Granites 01



**Karara South Granites 01**

Job No: HHM SLR      Map No: 1      Coordinate System: GDA 1994 MGA Zone 50  
 Date: 16/06/2020      Author: Glenn C

## 6.5 Karara South Granites 02

**Table 11: Karara South Granites 02**

SITE ID	KARARA SOUTH GRANITES 02
Site Type	Camp, Water Source, Artefact Scatter, Grindstone, Natural Feature
Central Coordinate Easting	474529
Central Coordinate Northing	6766551
Projection	GDA94
Zone	50
Site Dimensions (N-S x E-W)	185 m x 220 m
Archaeological Significance	Moderate

Karara South Granites 02 is located within the KML heritage survey area south (see Map 5). The site was recorded by Horizon Heritage in co-operation with the Widi Mob Traditional Owners in June 2020.

**Plate 17: Karara South Granites 02 with rock pool**



## KARARA SOUTH GRANITES 02

### Location of Karara South Granites 02

Karara South Granites 2 is a moderate-density artefact scatter located within and across two small granite ridgelines that run south to north and is bordered to the north, east and southwest. The slope of the ridge is approximately 5°-10°. The granite outcrop is very sparsely vegetated with seasonal plants (unknown sp.) and is surrounded by tall open woodland Tree Mallee of *Eucalyptus ebbanoensis* subsp. *ebbanoensis* over a Tall Open Shrubland to Tall Open Scrub of *Acacia acuminata*, *Acacia exocarpoides*, *Acacia tetragonophylla*, *Hakea preissii* and *Melaleuca filifolia* with scattered *Allocasuarina huegeliana* over a herbland dominated by *Ptilotus obovatus* var. *obovatus*). As well as grevillia (*Grevillia Intregrifolia*, *Grevillia Paradoxa*) and acacia (*Acacia assimilis* subsp. *Assimilis*, and *Eromophila*) scrubland with small scattered eucalyptus trees (*Eucalyptus leptapoda*) (Grien and Scheltema (eds), 2004).

Large areas of sediment deposits are interspersed throughout the granite bedrocks, which consists of granite gravels overlaying silt and sand sediment. At the time of recording, several large surface pools in the granite likely to hold quantities of water <100lt in throughout the wetter periods were located in the north and west sections of the site.

The site has limited disturbance with artefacts generally *in-situ* except for minor displacement because of seasonal rainfall and downslope movement. As such, Karara South Granites 02 is in moderate condition.

### Archaeological Site Recording Method

Karara South Granites 02 was recorded to a site identification standard. During the recording of the site, the boundary was redefined based on the decline in artefact density and the areas of disturbance. To identify the site, the archaeologist and Widi representatives walked the boundary defining the perimeter. A boundary was recorded using a Garmin GPS Map 64.

Artefact attributes were recorded at the area within the site featuring the highest densities of artefacts. Observational analytical information was recorded to provide an assessment of the lithic assemblage. The location for individual site features (grindstone) were noted and used to create the site map (Map 5).

### Site Description

Karara South Granites 02 is a moderate to low-density artefact assemblage consisting of quartz, crystal quartz, mudstone, chert, and BIF artefacts. It consists of several moderate density cluster of artefacts along the eastern edge of the site, surrounded by a sparser background artefact scatter. Maximum artefact density was approximately 4/m<sup>2</sup>. The maximum dimensions of the site are 185 metres from north to south at its widest point and 220 metres from east to west. No clear source of the flaked material was located within the site boundary, which implies that the material was transported to the site from several potential sources within the survey area, particularly to the south. This artefact scatter represents an activity centre were past Widi people likely used this place as a seasonal short term camp site were a range of day to day tasks were conducted.

### Objects in Relation to Section 6 of the *Aboriginal Heritage Act*

It is estimated that there are approximately 80-150 artefacts Karara South Granites 2. Most of the assemblage is composed of locally sourced Quartz (95%); other material identified included BIF, mudstone, crystal quartz and chert (combined at 5%). It is estimated that 50% of the artefacts were flakes (45% tertiary, 40% secondary, 5% primary) with 50% debitage, and were

predominantly complete. Several flakes exhibit signs of usewear. Whilst one Basalt single platform core and a Multi-platform core, also Basalt was identified, no formal tools or hammer stones were found at the site. The maximum artefact density (4.5/m<sup>2</sup>) was recorded within the main concentration, while over the rest of the site, the density was low, averaging at 1/m<sup>2</sup>.

As well as two Dolerite Upper grindstone (muller) fragments found at the site, one granite grindstone base fragment measuring 35 (L) x 25 (W) x 10 (T) cm was identified.

**Plate 18: Quartz flake ventral view**



**How the purpose of the objects is connected with the traditional cultural life of the Aboriginal peoples past or present**

Karara South Granites 02 appears to be a short-term habitation place where water procurement, tool manufacture and food processing has taken place. The objects present at site are debitage resulting from the manufacture of these tools by Aboriginal people who lived in the area in the past. The tools that were manufactured at Karara South Granites 02 were likely used in the everyday life of the Aboriginal inhabitants of the region. The cultural material found at this site is consistent with other recorded activity nodes around granites in this area. By linking the activity nodes and sites we can glimpse the broader cultural landscape use of past Aboriginal people.

Whilst grindstones in the Australian landscape were primarily used for food processing (see Fullagar 2007), more recent techniques of residue analysis have provided greater taxonomic identification of plant materials, as well as expanding our understanding of plant processing, woodworking/processing, animal processing, and mixed grinding activities (plant and animal) (Stephenson 2013).

The artefacts relate to the traditional cultural life of the Aboriginal people in the present as they provide a tangible link to their cultural heritage.

**Plate 19: Artefacts found at Karara South Granites 2 ventral view**

## IMPORTANCE AND SIGNIFICANCE

### To whom is the Place of Importance and Significance?

Karara South Granites 02 is of importance and significance to the Widi people. The artefact assemblage at the site has the potential to provide information regarding site and landscape use in the Midwest, as well as tool manufacture methods; therefore, it is potentially of importance and significance to the wider community.

The Widi Mob described Karara South Granites 01 as tangible evidence of their ancestors using resources found on their traditional lands. The water found within and on top of this granite natural feature would be seasonally available and the artefacts noted here is the physical evidence that Widi people in the past have used this feature.

The contemporary Widi Mob described this place as a seasonal camp located within a transitional zone (where people travelled from one resource to another). They considered that this would be an ideal camp spot for travelling to and from Mt Karara (women's site) in the cooler winter months. The artefacts identified at the place were thought to be associated with past Widi people utilising this ephemeral water source while travelling through country or undertaking hunting activities.

They also noted the prevalence of bush tucker resources like Quandong, bush tomato and sandalwood in the area which would have made for a reliable food resource at the right time of year. They acknowledged that there was limited evidence of sustained activity at this site but it is clearly a place past Widi people used. A Widi Mob member commented; *'our old people told us stories about country, where and when to find the food and water' and 'the granites were something they used'*.

They noted that the granite feature would be a good spot for seasonal rain water to accumulate in the granite rock pools. The granites are a good source of fresh water after both winter or summer rain. The grind stone at the site suggests past Widi people knew about and revisited and reused

this place. A Widi Mob commented that, *'Grindstones are found in places where you find water and seed and nuts. That's what our mob had here'*.

One Widi Elder stated; *'they knew where to go and where not to go'*. Another said; *'This place is a connecting place. It's connected to the other granites. Our people travelled by connecting places across the land. These places are like a spot on a map.'*

### **Intactness and Condition of the Place and Objects**

The artefacts at Karara South Granites 02 are in moderate condition. There appears to be some displacement of the material, which can be moved by sheet wash during heavy rain. At the time of recording, some evidence of this seasonal wash activity was noted across the site, with several objects partially obscured by fine silt sediment. Significant disturbance has encroached on some peripheral areas of the site; however, the integrity of the main artefact concentration has not been significantly impacted by these disturbances. As a consequence of the natural and cultural disturbance to the site, Karara South Granites 02 is considered to have a moderate to good intactness and condition rating.

### **Temporal Context**

The artefacts present at Karara South Granites 02 do not provide evidence of temporal context, as no formal tool types were identified to provide any indication to a time period for occupation. However, the lower grindstone fragment may provide some relative or a broad range temporal context for the site. Seed grinding technologies have been recognised as indicative of desert life around 3,500 BP (to 100BP), indicating an increased reliance on grass seeds during this time (Smith 1986, 1996).

**Plate 20: Lower grindstone identified at Karara South Granites 02**



### **The Complexity and Diversity of the Objects**

Owing to the minimal typological variation of the objects, raw material and absence of formal tools, Karara South Granites 02 is attributed a low complexity and diversity value. However, when

considering the complexity of tool types, grinding stones are limited to lithology and usability (i.e., can the item be handled easily and is the surface both stable and coarse enough). Looking at diversity, the range of variation of use wear and polish evident on the individual abraded surfaces may be indicative of varying function, as well as whether the item has had limited or heavy use. However, without the benefit of a more detailed analysis utilising biochemical staining (see Stephenson 2013) the complete range of use uses can only be guessed at.

### **Relationship between the Objects and the Place**

Karara South Granites 02 is a low-density artefact assemblage manufactured from locally sourced quartz, crystal quartz, mudstone, chert, and BIF. The absence of typological variability within the assemblage suggests that minimal artefact preparation or production took place at this site. The relationship between object and place exhibited at Karara South Granites 02, is one that is reoccurring across the Midwest. The site is positioned on a mid-elevation granite exposure with moderate views over the surrounding hills and would have included Mt Karara. Owing to minimal variation in material and typology of artefacts coupled with the extensive disturbance evident at the site, it is difficult to form any solid conclusions regarding intra-site patterning at Karara South Granites 02.

### **Context and Relationship of the Place to Other Places**

In comparing Karara South Granites 02 with other sites recorded in the surrounding survey area, the place is within close proximity to Karara South Granites 01 and Karara South CMT. Karara South Granites 02 is therefore considered to be part of a wider densely populated landscape highlighting patterns and movement of people across the landscape.

**Plate 21: Crystal quartz and basal artefacts at Karara South Granites 02 ventral view**



### **Rarity and Uniqueness of the Place/Objects**

In comparing Karara South Granites 02 within a regional context, it is neither rare nor unique. Examples of open low-density artefact assemblages are also found both within the immediate

landscape and broader region. The number, raw materials, and types of artefacts present at Karara South Granites 02 further supports this determination, as they are found in lithic assemblages both in the Karara Mining Lease and the broader Midwest region. As such, the site has a low - moderate rarity and uniqueness rating.

### Contribution to Research

Although it is unlikely that Karara South Granites 02 will provide significant information relating to the understanding of Aboriginal people and their utilisation of the natural environment, it is possible that this place, if subjected to systematic salvage and detailed analysis of materials and then considered in context with other places, may inform patterns of movement and occupation across the wider landscape.

More specifically we suggest that the assemblage at Karara South Granites 02 can contribute to research in the following ways:

- Research and assessment of the variability of artefact types within assemblages to determine whether a definitive link exists between assemblage characteristics and site function (Brown 1987; Veth 1993).
- Contribute to research into patterning within sites across the Midwest region, to determine whether Karara South Granites 02 supports our understanding of settlement models of Australia and the arid-zones as set out by Veth (1987; 1989).
- Contribute and support research conducted by Ryan and Morse (2009) into reduction sequences and variation within assemblages to discern any visible patterns or trends in artefact production.

**Table 12: Karara South Granites 02 Significance assessment**

Measure of Significance	Minimal	Low	Medium	High
Cultural	No information	Non-specific importance	Specific importance	High / Restricted
Regional	Local	Regional	State	National
Uniqueness	Common	Uncommon	Rare	Unique
Scientific	None	Some interest to CRM	Some academic research potential	High research potential
Integrity	Heavily disturbed	Some <i>in situ</i> material	Mostly <i>in situ</i> material	No disturbance

### Summary of Importance and Significance

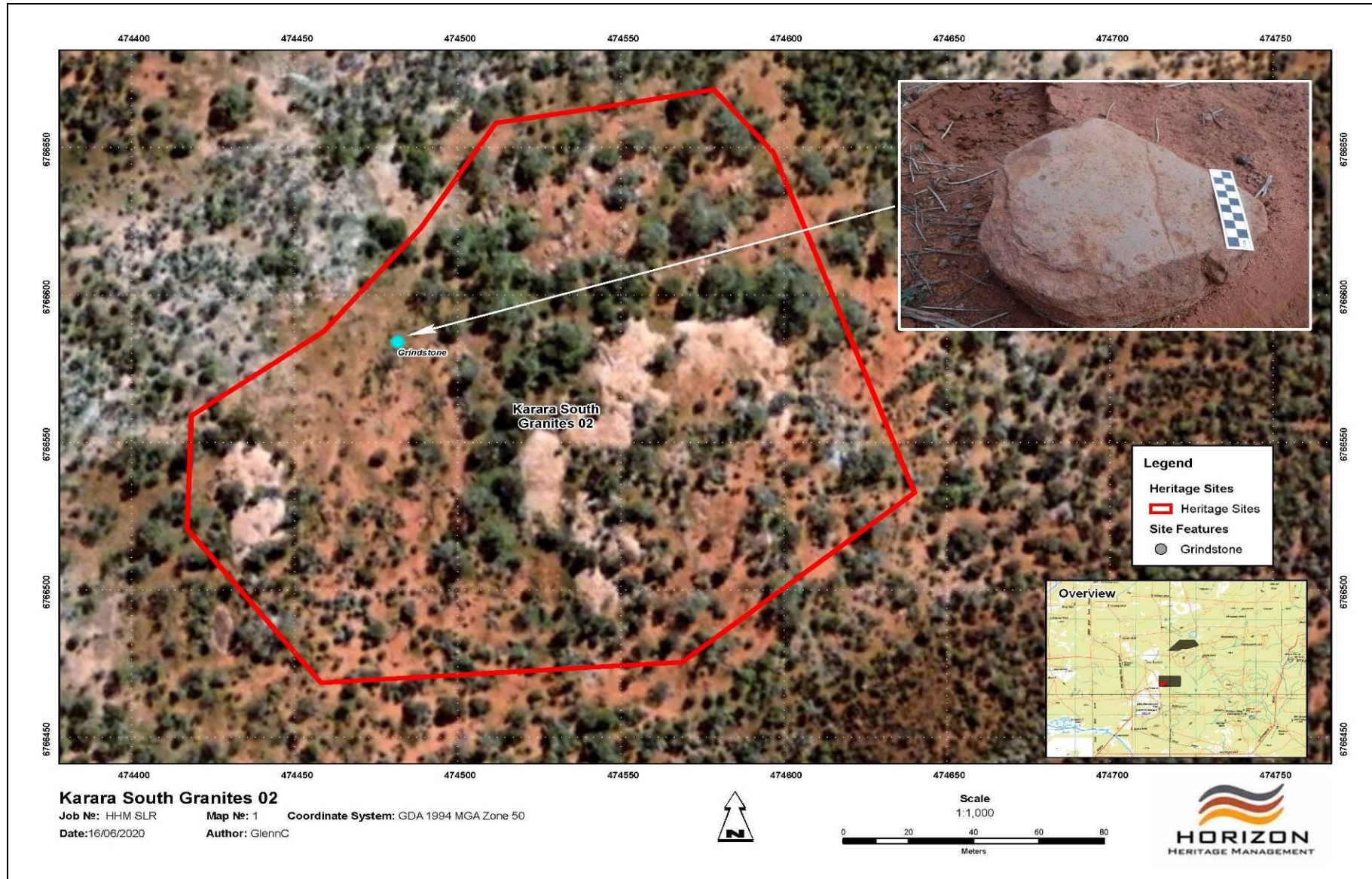
From both a local and regional context, Karara South Granites 02 is considered to be of *low* to moderate archaeological significance. The site is in moderate condition because of the noted disturbances at the time of recording, but it can potentially contribute a small amount of information to the understanding of Aboriginal people and their utilisation of the surrounding landscape. Karara South Granites 02 is an archaeological site; which in the opinion of the authors could constitute an Aboriginal site under section 5 (a) of the AHA.

The Widi Mob Traditional Owners consider that all sites, regardless of their significance, require protection through registration under the AHA and avoidance from impact by developers, as they are evidence of their connection to country and to do otherwise would undermine their role as custodians of the land. KML have indicated that they can avoid Karara South Granites 02.

#### **MANAGEMENT OF THE SITE**

- It is the preference of the Widi Mob that KML protects Karara South Granites 02 Aboriginal heritage site in situ. However, if future disturbance to Karara South Granites 02 is unavoidable, then KML should discuss any requirement for Section 18 consent under the AHA with the Widi Mob.
- KML ensures its employees and contractors (as appropriate) are advised of the existence and location of Aboriginal archaeological site Karara South Granites 02;
- This location may be deemed a site under section 5 (a) by the ACMC and should be avoided to avoid any breaches of Section 17 of the AHA;
- If damage or disturbance to this site cannot be avoided, then the Widi Mob Traditional Owners have requested the opportunity to conduct surface salvage of Karara South Granites 02 to ensure the protection of objects, and to enable maximum information to be gained from the site.

### Map 5: Karara South Granites 02



## 6.6 Karara South Gnamma Hole 1

Table 13: Karara South Gnamma Hole 1

SITE ID	KARARA SOUTH GNAMMA HOLE 1
Site Types	Water Source, Gnamma hole, Natural Feature
Central Coordinate Easting	474453
Central Coordinate Northing	6767112
Projection	GDA94
Zone	50
Site Dimensions	30 m radial buffer
Archaeological Significance	Low

Karara South Gnamma Hole 1 is located within the KML heritage survey area south (see Map 6). The site was recorded by Horizon Heritage in co-operation with the Widi Mob Traditional Owners in June 2020.

### KARARA SOUTH GNAMMA HOLE 1

#### Location of Karara South Gnamma Hole 1

Karara South Gnamma Hole 1 is a very small natural rock hole (gnamma) located on the south side of a small granite dome that run south to north. The slope of the ridge is approximately 5°-10°. The granite outcrop is surrounded by a sparse vegetation seasonal plants (unknown sp.) and is surrounded by tall open woodland Tree Mallee of *Eucalyptus ebbanoensis* subsp. *ebbanoensis* over a Tall Open Shrubland to Tall Open Scrub of *Acacia acuminata*, *Acacia exocarpoides*, *Acacia tetragonophylla*, *Hakea preissii* and *Melaleuca filifolia* with scattered *Allocasuarina huegeliana* over a herbland dominated by *Ptilotus obovatus* var. *obovatus*). As well as grevillia (*Grevillia Integrifolia*, *Grevillia Paradoxa*) and acacia (*Acacia assimilis* subsp. *Assimilis*, and *Eromophilia*) scrubland with small scattered eucalyptus trees (*Eucalyptus leptapoda*) (Grien and Scheltema (eds), 2004).

The site has limited disturbance and as such, Karara South Gnamma Hole 1 is in good condition.

#### Archaeological Site Recording Method

Karara South Gnamma Hole 1 was recorded to a site identification standard. To identify the site boundary, the archaeologist and Widi Mob representatives discussed and agreed how to delineate the boundary perimeter. A single waypoint, the extent of the gnamma hole, was recorded using a Garmin GPS Map 64 plus a 30 m buffer was added to determine the final site boundary.

#### Site Description

Karara South Gnamma Hole 1 is a very small natural rock hole located on the south side of a small granite dome. The gnamma hole is approximately 18 cm deep with a width of 15 cm and a length

of 20 cm. It is estimated to hold up to 5 litres of water. This gnamma has suffered from some silt build up with a potential cap stone evident in its opening. However, the water looks clean after recent rainfall in the area.

**Plate 22: Karara South Gnamma Hole 1**



**How the purpose of the objects is connected with the traditional cultural life of the Aboriginal peoples past or present**

Karara South Gnamma Hole 1 appears to be a place where water procurement, has taken place. No cultural material objects are present at this site. The gnamma hole links past Widi Aboriginal people to the contemporary Widi people as it provides a tangible link to their cultural heritage past.

**IMPORTANCE AND SIGNIFICANCE**

**To whom is the Place of Importance and Significance?**

Karara South Gnamma Hole 1 is of importance and significance to the Widi people.

They described the gnamma hole as a water source which would be a link in people's movement through this broader transitional zone during the appropriate season. The contemporary Widi Mob described how rainfall can be low and unpredictable on their traditional country. But water can be found if you know where to look.

Ephemeral water sources such as soaks, claypans, lakes and rock holes provided drinking water. Their ancestors depended on and protected their water sources for thousands of years. The knowledge of how to locate water sources was handed down to each subsequent generation. Gnamma holes or rock holes they said are natural cavities in the granite outcrops that act as a natural water tank which is replenished from rainwater runoff. These natural features were paramount to their ancestors living off the land.

A Widi Mob member commented; *'any and all water out here was valuable to our old people'*.

### **Intactness and Condition of the Place and Objects**

The gnamma hole at Karara South Gnamma Hole 1 is considered to have a good intactness and condition rating. The gnamma has not suffered from silt build up and the water looks clean after recent rainfall in the area. At the time of recording, some evidence of seasonal wash activity was noted at the base of the granites, with several rocks partially obscured by fine silt sediment.

### **Temporal Context**

The gnamma hole present at Karara South Gnamma Hole 1 does not provide evidence of temporal context, as there is no way to provide any indication to a time period for occupation. However, due to its proximity to Karara South Granites 01 and 02 which have lower grindstone fragments present, this may provide some relative or a broad range temporal context for the site. Seed grinding technologies have been recognised as indicative of desert life around 3,500 BP (to 100BP), indicating an increased reliance on grass seeds during this time (Smith 1986, 1996).

### **The Complexity and Diversity of the Objects**

Owing to the minimal size of the gnamma hole and lack of any associated artefact assemblage, Karara South Gnamma Hole 1 is attributed a low complexity and diversity value.

### **Relationship between the Objects and the Place**

The Karara South Gnamma Hole 1 site is positioned on a low-elevation granite exposure with minimal views over the surrounding landscape. Owing to the lack of any cultural material evident at the site, it is difficult to form any solid conclusions regarding intra-site patterning at Karara South Gnamma Hole 1.

### **Context and Relationship of the Place to Other Places**

In comparing Karara South Gnamma Hole 1 with other sites recorded in the surrounding survey area, the place is within close proximity to Karara South Granites 01 and Karara South Granites 02. Karara South Gnamma Hole 1 is therefore considered to be part of a wider densely populated landscape highlighting patterns and movement of people across the landscape.

### **Rarity and Uniqueness of the Place/Objects**

In comparing Karara South Gnamma Hole 1 within a regional context, it is neither rare nor unique. Examples of gnamma holes are found both within the immediate landscape and broader region. As such, the site has a low rarity and uniqueness rating.

### **Contribution to Research**

Although it is unlikely that Karara South Gnamma Hole 1 will provide significant information relating to the understanding of Aboriginal people and their utilisation of the natural environment, it is possible that this place if considered in context with other places, may inform patterns of movement and occupation across the wider landscape.

### Summary of Importance and Significance

From both a local and regional context, Karara South Gnamma Hole 1 is considered to be of *low* archaeological significance. The site is in good condition at the time of recording. It can potentially contribute a small amount of information to the understanding of Aboriginal people and their utilisation of the surrounding landscape. Karara South Gnamma Hole 1 is an archaeological site; which in the opinion of the authors could constitute an Aboriginal site under section 5 (a) of the AHA.

While no specific cultural information was forthcoming from the Widi Mob Traditional Owners present during the site recording. However they consider that all sites, regardless of their significance, require protection through registration under the AHA and avoidance from impact by developers, as they are evidence of their connection to country and to do otherwise would undermine their role as custodians of the land. KML have indicated that they can avoid Karara South Gnamma Hole 1.

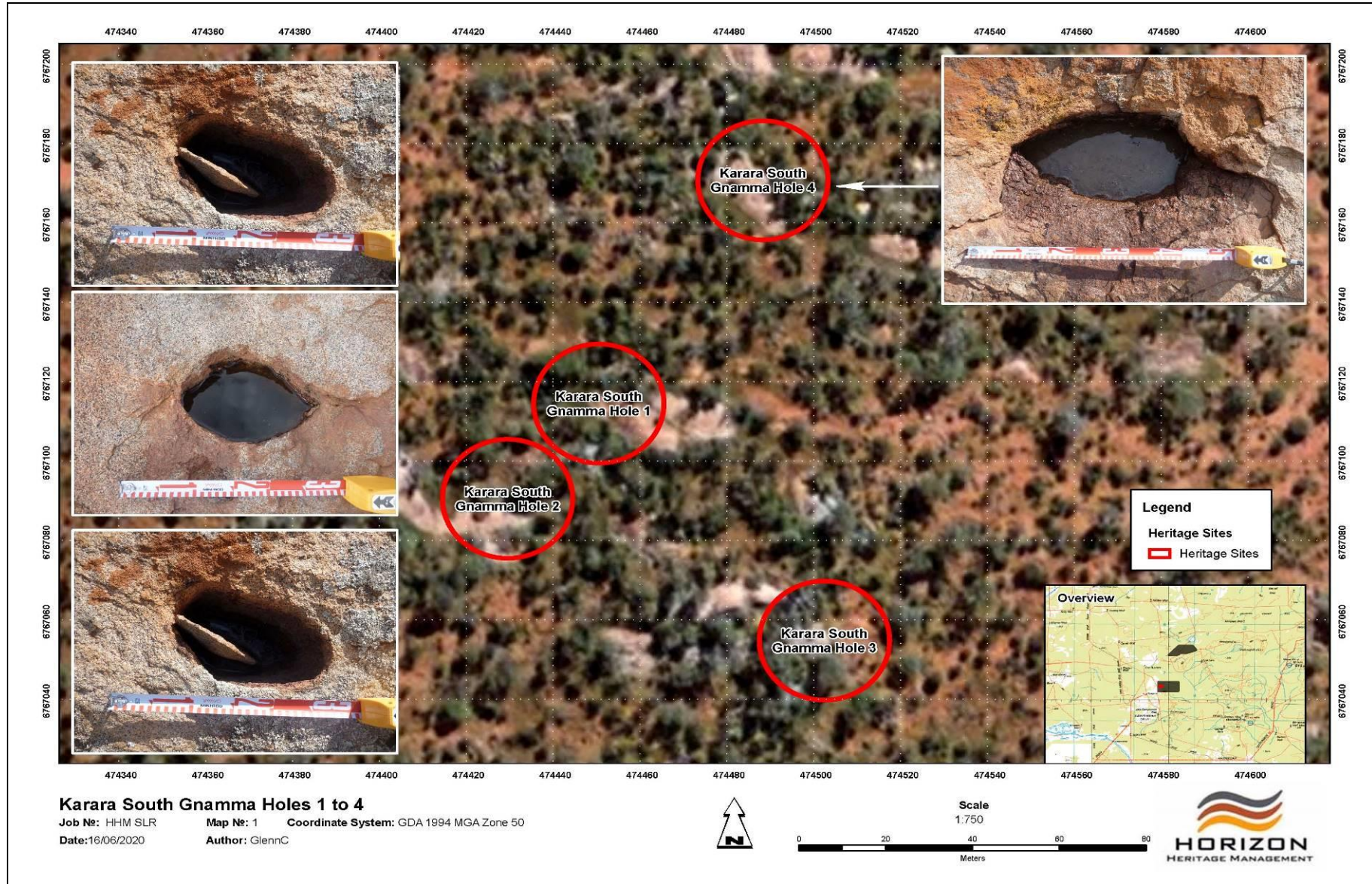
**Table 14: Karara South Gnamma Hole 1 Significance assessment**

Measure of Significance	Minimal	Low	Medium	High
Cultural	No information	Non-specific importance	Specific importance	High / Restricted
Regional	Local	Regional	State	National
Uniqueness	Common	Uncommon	Rare	Unique
Scientific	None	Some interest to CRM	Some academic research potential	High research potential
Integrity	Heavily disturbed	Some <i>in situ</i> material	Mostly <i>in situ</i> material	No disturbance

### MANAGEMENT OF THE SITE

- It is the preference of the Widi Mob that KML protects Karara South Gnamma Hole 1 Aboriginal heritage site *in situ*. However, if future disturbance to Karara South Gnamma Hole 1 is unavoidable, then KML should discuss any requirement for Section 18 consent under the AHA with the Widi Mob.
- KML ensures its employees and contractors (as appropriate) are advised of the existence and location of Aboriginal archaeological site Karara South Gnamma Hole 1;
- This location may be deemed a site under section 5 (a) by the ACMC and should be avoided to avoid any breaches of Section 17 of the AHA.

### Map 6: Karara South Gnamma Holes 1 - 4



## 6.7 Karara South Gnamma Hole 2

Table 15: Karara South Gnamma Hole 2

SITE ID	KARARA SOUTH GNAMMA HOLE 2
Site Types	Water Source, Gnamma hole, Natural Feature
Central Coordinate Easting	474429
Central Coordinate Northing	6767091
Projection	GDA94
Zone	50
Site Dimensions	30 m radial buffer
Archaeological Significance	Low

Karara South Gnamma Hole 2 is located within the KML heritage survey area south (see Map 6). The site was recorded by Horizon Heritage in co-operation with the Widi Mob Traditional Owners in June 2020.

### KARARA SOUTH GNAMMA HOLE 2

#### Location of Karara South Gnamma Hole 2

Karara South Gnamma Hole 2 is a very small natural rock hole (gnamma) located on the north side of a small granite dome that run South to North. The slope of the ridge is approximately 5°-10°. The granite outcrop is surrounded by a sparse vegetation seasonal plants (unknown sp.) and is surrounded by tall open woodland Tree Mallee of *Eucalyptus ebbanoensis* subsp. *ebbanoensis* over a Tall Open Shrubland to Tall Open Scrub of *Acacia acuminata*, *Acacia exocarpoides*, *Acacia tetragonophylla*, *Hakea preissii* and *Melaleuca filifolia* with scattered *Allocasuarina huegeliana* over a herbland dominated by *Ptilotus obovatus* var. *obovatus*). As well as grevillia (*Grevillia Integrifolia*, *Grevillia Paradoxa*) and acacia (*Acacia assimilis* subsp. *Assimilis*, and *Eromophilia*) scrubland with small scattered eucalyptus trees (*Eucalyptus leptapoda*) (Grien and Scheltema (eds), 2004).

The site has limited disturbance and as such, Karara South Gnamma Hole 2 is in good condition.

#### Archaeological Site Recording Method

Karara South Gnamma Hole 2 was recorded to a site identification standard. To identify the site boundary, the archaeologist and Widi Mob representatives discussed and agreed how to delineate the boundary perimeter. A single waypoint, the extent of the gnamma hole, was recorded using a Garmin GPS Map 64 plus a 30 m buffer was added to determine the final site boundary.

#### Site Description

Karara South Gnamma Hole 2 is a very small natural rock hole located on the south side of a small granite dome. The gnamma hole is approximately 18 cm deep with a width of 13 cm and a length

of 20 cm. It is estimated to hold up to 5 litres of water. The gnamma hole was full of clean water at the time of recording, due to recent rain.

**Plate 23: Karara South Gnamma Hole 2**



**How the purpose of the objects is connected with the traditional cultural life of the Aboriginal peoples past or present**

Karara South Gnamma Hole 2 appears to be a place where water procurement, has taken place. No cultural material objects are present at this site. The gnamma hole links past Widi Aboriginal people to the contemporary Widi people as it provides a tangible link to their cultural heritage past.

**IMPORTANCE AND SIGNIFICANCE**

**To whom is the Place of Importance and Significance?**

Karara South Gnamma Hole 2 is of importance and significance to the Widi people.

They described the gnamma hole as a water source which would be a link in people’s movement through this broader transitional zone during the appropriate season. The contemporary Widi Mob described how rainfall can be low and unpredictable on their traditional country. But water can be found if you know where to look.

Ephemeral water sources such as soaks, claypans, lakes and rock holes provided drinking water. Their ancestors depended on and protected their water sources for thousands of years. The knowledge of how to locate water sources was handed down to each subsequent generation. Gnamma holes or rock holes they said are natural cavities in the granite outcrops that act as a natural water tank which is replenished from rainwater runoff. These natural features were paramount to their ancestors living off the land.

A Widi Mob member commented; *‘any and all water out here was valuable to our old people’.*

### Intactness and Condition of the Place and Objects

The gnamma hole at Karara South Gnamma Hole 2 is considered to have a good intactness and condition rating. The gnamma has not suffered from silt build up and the water looks clean after recent rainfall in the area. At the time of recording, some evidence of seasonal wash activity was noted at the base of the granites, with several rocks partially obscured by fine silt sediment.

### Temporal Context

The gnamma hole present at Karara South Gnamma Hole 2 does not provide evidence of temporal context, as there is no way to provide any indication to a time period for occupation. However, due to its proximity to Karara South Granites 01 and 02 which have lower grindstone fragments present, this may provide some relative or a broad range temporal context for the site. Seed grinding technologies have been recognised as indicative of desert life around 3,500 BP (to 100BP), indicating an increased reliance on grass seeds during this time (Smith 1986, 1996).

### The Complexity and Diversity of the Objects

Owing to the minimal size of the gnamma hole and lack of any associated artefact assemblage, Karara South Gnamma Hole 2 is attributed a low complexity and diversity value.

**Plate 24: Survey team at Karara South Gnamma Hole 2**



### Relationship between the Objects and the Place

The Karara South Gnamma Hole 2 site is positioned on a low-elevation granite exposure with minimal views over the surrounding landscape. Owing to the lack of any cultural material evident at the site, it is difficult to form any solid conclusions regarding intra-site patterning at Karara South Gnamma Hole 2.

### Context and Relationship of the Place to Other Places

In comparing Karara South Gnamma Hole 2 with other sites recorded in the surrounding survey area, the place is within close proximity to Karara South Gnamma Holes 1, 3 & 4, Karara South

Granites 01 and Karara South Granites 02. Karara South Gnamma Hole 2 is therefore considered to be part of a wider densely populated landscape highlighting patterns and movement of people across the landscape.

### Rarity and Uniqueness of the Place/Objects

In comparing Karara South Gnamma Hole 2 within a regional context, it is neither rare nor unique. Examples of gnamma holes are found both within the immediate landscape and broader region. As such, the site has a low rarity and uniqueness rating.

### Contribution to Research

Although it is unlikely that Karara South Gnamma Hole 2 will provide significant information relating to the understanding of Aboriginal people and their utilisation of the natural environment, it is possible that this place if considered in context with other places, may inform patterns of movement and occupation across the wider landscape.

### Summary of Importance and Significance

From both a local and regional context, Karara South Gnamma Hole 2 is considered to be of *low* archaeological significance. The site is in good condition at the time of recording. It can potentially contribute a small amount of information to the understanding of Aboriginal people and their utilisation of the surrounding landscape. Karara South Gnamma Hole 2 is an archaeological site; which in the opinion of the authors could constitute an Aboriginal site under section 5 (a) of the AHA.

While no specific cultural information was forthcoming from the Widi Mob Traditional Owners present during the site recording. However they consider that all sites, regardless of their significance, require protection through registration under the AHA and avoidance from impact by developers, as they are evidence of their connection to country and to do otherwise would undermine their role as custodians of the land. KML have indicated that they can avoid Karara South Gnamma Hole 2.

Table 16: Karara South Gnamma Hole 2 Significance assessment

Measure of Significance	Minimal	Low	Medium	High
Cultural	No information	Non-specific importance	Specific importance	High / Restricted
Regional	Local	Regional	State	National
Uniqueness	Common	Uncommon	Rare	Unique
Scientific	None	Some interest to CRM	Some academic research potential	High research potential
Integrity	Heavily disturbed	Some <i>in situ</i> material	Mostly <i>in situ</i> material	No disturbance

### **MANAGEMENT OF THE SITE**

- It is the preference of the Widi Mob that KML protects Karara Gnamma Hole 2 Aboriginal heritage site in situ. However, if future disturbance to Karara South Gnamma Hole 2 is unavoidable, then KML should discuss any requirement for Section 18 consent under the AHA with the Widi Mob.
- KML ensures its employees and contractors (as appropriate) are advised of the existence and location of Aboriginal archaeological site Karara South Gnamma Hole 2;
- This location may be deemed a site under section 5 (a) by the ACMC and should be avoided to avoid any breaches of Section 17 of the AHA.

## 6.8 Karara South Gnamma Hole 3

Table 17: Karara South Gnamma Hole 3

SITE ID	KARARA SOUTH GNAMMA HOLE 3
Site Types	Water Source, Gnamma hole, Natural Feature
Central Coordinate Easting	474502
Central Coordinate Northing	6767054
Projection	GDA94
Zone	50
Site Dimensions	30 m radial buffer
Archaeological Significance	Low

Karara South Gnamma Hole 3 is located within the KML heritage survey area south (see Map 6). The site was recorded by Horizon Heritage in co-operation with the Widi Mob Traditional Owners in June 2020.

### KARARA SOUTH GNAMMA HOLE 3

#### Location of Karara South Gnamma Hole 3

Karara South Gnamma Hole 3 is a very small natural rock hole (gnamma) located on the east side of a small granite dome that run south to north. The slope of the ridge is approximately 5°-10°. The granite outcrop is surrounded by a sparse vegetation seasonal plants (unknown sp.) and is surrounded by tall open woodland Tree Mallee of *Eucalyptus ebbanoensis* subsp. *ebbanoensis* over a Tall Open Shrubland to Tall Open Scrub of *Acacia acuminata*, *Acacia exocarpoides*, *Acacia tetragonophylla*, *Hakea preissii* and *Melaleuca filifolia* with scattered *Allocasuarina huegeliana* over a herbland dominated by *Ptilotus obovatus* var. *obovatus*). As well as grevillia (*Grevillia Integrifolia*, *Grevillia Paradoxa*) and acacia (*Acacia assimilis* subsp. *Assimilis*, and *Eromophilia*) scrubland with small scattered eucalyptus trees (*Eucalyptus leptapoda*) (Grien and Scheltema (eds), 2004).

The site has limited disturbance and as such, Karara South Gnamma Hole 3 is in good condition.

#### Archaeological Site Recording Method

Karara South Gnamma Hole 3 was recorded to a site identification standard. To identify the site boundary, the archaeologist and Widi Mob representatives discussed and agreed how to delineate the boundary perimeter. A single waypoint, the extent of the gnamma hole, was recorded using a Garmin GPS Map 64 plus a 30 m buffer was added to determine the final site boundary.

#### Site Description

Karara South Gnamma Hole 3 is a very small natural rock hole located on the south side of a small granite dome. The gnamma hole is approximately 30 cm deep with a width of 20 cm and a length

of 40 cm. It is estimated to hold up to 20 litres of water. The gnamma hole had water in it at the time of recording, due to recent rain.

**Plate 25: Karara South Gnamma Hole 3**



**How the purpose of the objects is connected with the traditional cultural life of the Aboriginal peoples past or present**

Karara South Gnamma Hole 3 appears to be a place where water procurement, has taken place. No cultural material objects are present at this site. The gnamma hole links past Widi Aboriginal people to the contemporary Widi people as it provides a tangible link to their cultural heritage past.

**IMPORTANCE AND SIGNIFICANCE**

**To whom is the Place of Importance and Significance?**

Karara South Gnamma Hole 3 is of importance and significance to the Widi people.

They described the gnamma hole as a water source which would be a link in people’s movement through this broader transitional zone during the appropriate season. The contemporary Widi Mob described how rainfall can be low and unpredictable on their traditional country. But water can be found if you know where to look.

Ephemeral water sources such as soaks, claypans, lakes and rock holes provided drinking water. Their ancestors depended on and protected their water sources for thousands of years. The knowledge of how to locate water sources was handed down to each subsequent generation. Gnamma holes or rock holes they said are natural cavities in the granite outcrops that act as a natural water tank which is replenished from rainwater runoff. These natural features were paramount to their ancestors living off the land.

A Widi Mob member commented; *‘any and all water out here was valuable to our old people’*.

### **Intactness and Condition of the Place and Objects**

The gnamma hole at Karara South Gnamma Hole 3 is considered to have a good intactness and condition rating. The gnamma has not suffered from silt build up and the water looks clean after recent rainfall in the area. At the time of recording, some evidence of seasonal wash activity was noted at the base of the granites, with several rocks partially obscured by fine silt sediment.

### **Temporal Context**

The gnamma hole present at Karara South Gnamma Hole 3 does not provide evidence of temporal context, as there is no way to provide any indication to a time period for occupation. However, due to its proximity to Karara South Granites 01 and 02 which have lower grindstone fragments present, this may provide some relative or a broad range temporal context for the site. Seed grinding technologies have been recognised as indicative of desert life around 3,500 BP (to 100BP), indicating an increased reliance on grass seeds during this time (Smith 1986, 1996).

### **The Complexity and Diversity of the Objects**

Owing to the minimal size of the gnamma hole and lack of any associated artefact assemblage, Karara South Gnamma Hole 3 is attributed a low complexity and diversity value.

### **Relationship between the Objects and the Place**

The Karara South Gnamma Hole 3 site is positioned on a low-elevation granite exposure with minimal views over the surrounding landscape. Owing to the lack of any cultural material evident at the site, it is difficult to form any solid conclusions regarding intra-site patterning at Karara South Gnamma Hole 3.

### **Context and Relationship of the Place to Other Places**

In comparing Karara South Gnamma Hole 3 with other sites recorded in the surrounding survey area, the place is within close proximity to Karara South Gnamma Holes 1, 2 & 4, Karara South Granites 01 and Karara South Granites 02. Karara South Gnamma Hole 3 is therefore considered to be part of a wider densely populated landscape highlighting patterns and movement of people across the landscape.

### **Rarity and Uniqueness of the Place/Objects**

In comparing Karara South Gnamma Hole 3 within a regional context, it is neither rare nor unique. Examples of gnamma holes are found both within the immediate landscape and broader region. As such, the site has a low rarity and uniqueness rating.

### **Contribution to Research**

Although it is unlikely that Karara South Gnamma Hole 3 will provide significant information relating to the understanding of Aboriginal people and their utilisation of the natural environment, it is possible that this place if considered in context with other places, may inform patterns of movement and occupation across the wider landscape.

### **Summary of Importance and Significance**

From both a local and regional context, Karara South Gnamma Hole 3 is considered to be of *low* archaeological significance. The site is in good condition at the time of recording. It can potentially

contribute a small amount of information to the understanding of Aboriginal people and their utilisation of the surrounding landscape. Karara South Gnamma Hole 3 is an archaeological site; which in the opinion of the authors could constitute an Aboriginal site under section 5 (a) of the AHA.

While no specific cultural information was forthcoming from the Widi Mob Traditional Owners present during the site recording. However they consider that all sites, regardless of their significance, require protection through registration under the AHA and avoidance from impact by developers, as they are evidence of their connection to country and to do otherwise would undermine their role as custodians of the land. KML have indicated that they can avoid Karara South Gnamma Hole 3.

**Table 18: Karara South Gnamma Hole 3 Significance assessment**

Measure of Significance	Minimal	Low	Medium	High
Cultural	No information	Non-specific importance	Specific importance	High / Restricted
Regional	Local	Regional	State	National
Uniqueness	Common	Uncommon	Rare	Unique
Scientific	None	Some interest to CRM	Some academic research potential	High research potential
Integrity	Heavily disturbed	Some <i>in situ</i> material	Mostly <i>in situ</i> material	No disturbance

#### MANAGEMENT OF THE SITE

- It is the preference of the Widi Mob that KML protects Karara South Gnamma Hole 3 Aboriginal heritage site in situ. However, if future disturbance to Karara South Gnamma Hole 3 is unavoidable, then KML should discuss any requirement for Section 18 consent under the AHA with the Widi Mob.
- KML ensures its employees and contractors (as appropriate) are advised of the existence and location of Aboriginal archaeological site Karara South Gnamma Hole 3;
- This location may be deemed a site under section 5 (a) by the ACMC and should be avoided to avoid any breaches of Section 17 of the AHA.

## 6.9 Karara South Gnamma Hole 4

Table 19: Karara South Gnamma Hole 4

SITE ID	KARARA SOUTH GNAMMA HOLE 4
Site Types	Water Source, Gnamma hole, Natural Feature
Central Coordinate Easting	474487
Central Coordinate Northing	6767171
Projection	GDA94
Zone	50
Site Dimensions	30 m radial buffer
Archaeological Significance	Low

Karara South Gnamma Hole 4 is located within the KML heritage survey area south (see Map 6). The site was recorded by Horizon Heritage in co-operation with the Widi Mob Traditional Owners in June 2020.

### KARARA SOUTH GNAMMA HOLE 4

#### Location of Karara South Gnamma Hole 4

Karara South Gnamma Hole 4 is a very small natural rock hole (gnamma) located on the north side of a small granite dome that run South to North. The slope of the ridge is approximately 5°-10°. The granite outcrop is surrounded by a sparse vegetation seasonal plants (unknown sp.) and is surrounded by tall open woodland Tree Mallee of *Eucalyptus ebbanoensis* subsp. *ebbanoensis* over a Tall Open Shrubland to Tall Open Scrub of *Acacia acuminata*, *Acacia exocarpoides*, *Acacia tetragonophylla*, *Hakea preissii* and *Melaleuca filifolia* with scattered *Allocasuarina huegeliana* over a herbland dominated by *Ptilotus obovatus* var. *obovatus*). As well as grevillia (*Grevillia Intregrifolia*, *Grevillia Paradoxa*) and acacia (*Acacia assimilis* subsp. *Assimilis*, and *Eromophilia*) scrubland with small scattered eucalyptus trees (*Eucalyptus leptapoda*) (Grien and Scheltema (eds), 2004).

The site has limited disturbance and as such, Karara South Gnamma Hole 4 is in good condition.

#### Archaeological Site Recording Method

Karara South Gnamma Hole 4 was recorded to a site identification standard. To identify the site boundary, the archaeologist and Widi Mob representatives discussed and agreed how to delineate the boundary perimeter. A single waypoint, the extent of the gnamma hole, was recorded using a Garmin GPS Map 64 plus a 30 m buffer was added to determine the final site boundary.

#### Site Description

Karara South Gnamma Hole 4 is a very small natural rock hole located on the south side of a small granite dome. The gnamma hole is approximately 20 cm deep with a width of 12 cm and a length

of 21 cm. It is estimated to hold up to 4 litres of water. The gnamma hole contained silted debris and water at the time of recording, due to recent rain. Widi Mob Traditional Owner Elder Clayton Lewis proceeded to clean the silt out of the gnamma hole. He did this by using his hands to scoop the silt out to clean and maintain the gnamma hole in line with traditional responsibilities. Note the photograph below showing dirty water.

**Plate 26: Karara South Gnamma Hole 4**



**How the purpose of the objects is connected with the traditional cultural life of the Aboriginal peoples past or present**

Karara South Gnamma Hole 4 appears to be a place where water procurement, has taken place. No cultural material objects are present at this site. The gnamma hole links past Widi Aboriginal people to the contemporary Widi people as it provides a tangible link to their cultural heritage past.

**IMPORTANCE AND SIGNIFICANCE**

**To whom is the Place of Importance and Significance?**

Karara South Gnamma Hole 4 is of importance and significance to the Widi people.

They described the gnamma hole as a water source which would be a link in people’s movement through this broader transitional zone during the appropriate season. The contemporary Widi Mob described how rainfall can be low and unpredictable on their traditional country. But water can be found if you know where to look.

Ephemeral water sources such as soaks, claypans, lakes and rock holes provided drinking water. Their ancestors depended on and protected their water sources for thousands of years. The knowledge of how to locate water sources was handed down to each subsequent generation. Gnamma holes or rock holes they said are natural cavities in the granite outcrops that act as a

natural water tank which is replenished from rainwater runoff. These natural features were paramount to their ancestors living off the land.

A Widi Mob member commented; *'any and all water out here was valuable to our old people'*.

### **Intactness and Condition of the Place and Objects**

The gnamma hole at Karara South Gnamma Hole 4 is considered to have a good intactness and condition rating. This gnamma has suffered from some silt build up. However, it still held water evident after recent rainfall in the area. At the time of recording, some evidence of seasonal wash activity was noted at the base of the granites, with several rocks partially obscured by fine silt sediment.

### **Temporal Context**

The gnamma hole present at Karara South Gnamma Hole 4 does not provide evidence of temporal context, as there is no way to provide any indication to a time period for occupation. However, due to its proximity to Karara South Granites 01 and 02 which have lower grindstone fragments present, this may provide some relative or a broad range temporal context for the site. Seed grinding technologies have been recognised as indicative of desert life around 3,500 BP (to 100BP), indicating an increased reliance on grass seeds during this time (Smith 1986, 1996).

### **The Complexity and Diversity of the Objects**

Owing to the minimal size of the gnamma hole and lack of any associated artefact assemblage, Karara South Gnamma Hole 4 is attributed a low complexity and diversity value.

### **Relationship between the Objects and the Place**

The Karara South Gnamma Hole 4 site is positioned on a low-elevation granite exposure with minimal views over the surrounding landscape. Owing to the lack of any cultural material evident at the site, it is difficult to form any solid conclusions regarding intra-site patterning at Karara South Gnamma Hole 4.

### **Context and Relationship of the Place to Other Places**

In comparing Karara South Gnamma Hole 4 with other sites recorded in the surrounding survey area, the place is within close proximity to Karara South Gnamma Holes 1, 2 & 3, Karara South Granites 01 and Karara South Granites 02. Karara South Gnamma Hole 4 is therefore considered to be part of a wider densely populated landscape highlighting patterns and movement of people across the landscape.

### **Rarity and Uniqueness of the Place/Objects**

In comparing Karara South Gnamma Hole 4 within a regional context, it is neither rare nor unique. Examples of gnamma holes are found both within the immediate landscape and broader region. As such, the site has a low rarity and uniqueness rating.

### **Contribution to Research**

Although it is unlikely that Karara South Gnamma Hole 4 will provide significant information relating to the understanding of Aboriginal people and their utilisation of the natural environment,

it is possible that this place if considered in context with other places, may inform patterns of movement and occupation across the wider landscape.

### Summary of Importance and Significance

From both a local and regional context, Karara South Gnamma Hole 4 is considered to be of *low* archaeological significance. The site is in good condition at the time of recording. It can potentially contribute a small amount of information to the understanding of Aboriginal people and their utilisation of the surrounding landscape. Karara South Gnamma hole 4 is an archaeological site; which in the opinion of the authors could constitute an Aboriginal site under section 5 (a) of the AHA.

While no specific cultural information was forthcoming from the Widi Mob Traditional Owners present during the site recording. However they consider that all sites, regardless of their significance, require protection through registration under the AHA and avoidance from impact by developers, as they are evidence of their connection to country and to do otherwise would undermine their role as custodians of the land. KML have indicated that they can avoid Karara South Gnamma Hole 4.

**Table 20: Karara South Gnamma Hole 4 Significance assessment**

Measure of Significance	Minimal	Low	Medium	High
Cultural	No information	Non-specific importance	Specific importance	High / Restricted
Regional	Local	Regional	State	National
Uniqueness	Common	Uncommon	Rare	Unique
Scientific	None	Some interest to CRM	Some academic research potential	High research potential
Integrity	Heavily disturbed	Some <i>in situ</i> material	Mostly <i>in situ</i> material	No disturbance

### MANAGEMENT OF THE SITE

- It is the preference of the Widi Mob that KML protects Karara South Gnamma Hole 4 Aboriginal heritage site in situ. However, if future disturbance to Karara South Gnamma Hole 4 is unavoidable, then KML should discuss any requirement for Section 18 consent under the AHA with the Widi Mob.
- KML ensures its employees and contractors (as appropriate) are advised of the existence and location of Aboriginal archaeological site Karara South Gnamma Hole 4;
- This location may be deemed a site under section 5 (a) by the ACMC and should be avoided to avoid any breaches of Section 17 of the AHA.

## **6.10 DPLH 21374 Karara/02 – Mt Karara**

Mt Karara is a women's only Ceremonial site that played a ritual role in the cultural lives of Widi Aboriginal women. The ceremonial site located at the southern end of Mt Karara is an initiation ground where women were taught and put through the law. Ethnographic information collected during heritage surveys have indicated that this site is considered dangerous to men and is a place for women only. Due to the culturally sensitive nature of this information any current information held at the DPLH has a restricted access to women only. This place was recorded by Australian Interaction Consultants (2008) with the Widi Mob.

### **Summary of Importance and Significance**

DPLH 21374 Karara/02 – Mt Karara has been assessed under section 5 of the AHA and been determined as stored data 'not a site'. This place has not been afforded protection under the AHA and has been completely destroyed by mining activities.

### **MANAGEMENT OF PLACE**

- None required

## 6.11 DPLH 26489 MIOP 11 (Karara North Artefacts 02)

DPLH 26489 MIOP 11 (Karara North Artefacts 02) is a large artefact scatter spread over a large area with nodes of higher concentration. The site is located on a horseshoe shaped ridge with an incised valley and creek line running through the centre. The artefacts identified consist of a range of lithic materials but the vast majority (>80%) were constructed of quartz. The majority of artefacts were flakes and few cores were present. The creek line is vegetated by open eucalypt woodland, while the ridgeline is dominated by thick mulga scrub. A small rock shelter is located on the ridgeline overlooking the creek. No artefacts were noted in direct association, nor was there a deposit present within the cave. This place was recorded by Australian Interaction Consultants (2009) with the Widi Mob.

### Summary of Importance and Significance

DPLH 26489 MIOP 11 (Karara North Artefacts 02) has a lodged status on the register of sites as it is yet to be assessed under section 5 of the AHA. Therefore it is currently an Other Heritage Place.

From both a local and regional context, DPLH 26489 MIOP 11 (Karara North Artefacts 02) is considered to be of *low* archaeological significance. The site is in good condition at the time of viewing. It can potentially contribute a small amount of information to the understanding of Aboriginal people and their utilisation of the surrounding landscape. DPLH 26489 MIOP 11 (Karara North Artefacts 02) is an archaeological site; which in the opinion of the authors could constitute an Aboriginal site under section 5 (a) of the AHA.

KML have indicated that they can avoid DPLH 26489 MIOP 11.

**Table 21: DPLH 26489 MIOP 11 Significance assessment**

Measure of Significance	Minimal	Low	Medium	High
Cultural	No information	Non-specific importance	Specific importance	High / Restricted
Regional	Local	Regional	State	National
Uniqueness	Common	Uncommon	Rare	Unique
Scientific	None	Some interest to CRM	Some academic research potential	High research potential
Integrity	Heavily disturbed	Some <i>in situ</i> material	Mostly <i>in situ</i> material	No disturbance

### MANAGEMENT OF PLACE

- It is the preference of the Widi Mob that KML protects DPLH 26489 MIOP 11 (Karara North Artefacts 02) Aboriginal heritage site in situ. However, if future disturbance to DPLH 26489 MIOP 11 (Karara North Artefacts 02) is unavoidable, then KML should discuss any requirement for Section 18 consent under the AHA with the Widi Mob.
- KML ensures its employees and contractors (as appropriate) are advised of the existence and location of Aboriginal archaeological site DPLH 26489 MIOP 11 (Karara North Artefacts 02);

- This location may be deemed a site under section 5 (a) by the ACMC and should be avoided to avoid any breaches of Section 17 of the AHA;
- If damage or disturbance to this site cannot be avoided, then the Widi Mob Traditional Owners have requested the opportunity to conduct surface salvage of DPLH 26489 MIOP 11 (Karara North Artefacts 02) to ensure the protection of objects, and to enable maximum information to be gained from the site. This request is in line with;
- Australian Interaction Consultants (2009) in a previous heritage survey report with Widi Mob recommended that; any Section 18 permission under the *Aboriginal Heritage Act (1972)* granted to disturb MIOP11 carry the condition of further sampling and salvage to preserve as much of the archaeological record as possible.

## 6.12 DPLH 26808 MIOP 15 (Karara North Site Complex 01)

DPLH 26808 MIOP 15 (Karara North Site Complex 01) is an extensive area of resource exploitation and occupation focused around several rockshelters and water sources. A total of three quartz quarries and associated artefact scatters, five gnamma holes and six rockshelters were identified within the boundaries of the site complex.

Eucalypts (York Gums) dominate the open floodways around the creeklines and the ridge tops are heavily vegetated with acacia scrub. The creekline drains into a large claypan approximately 3km to the north east.

The rockshelters occur on siltstone ridges and overlook a creekline slicing through the site. Many of the individual caves contain artefacts and soil deposits and the potential for intact sub-surface assemblages is high.

The five gnamma holes identified within the site boundaries were of varying size, ranging in volume from 3L to 27L. One of the larger gnamma holes was covered by a large cap stone and was full to the brim with water at the time of recording.

The exploited quartz stone sources were for the most part reduced outcrops with extensive scatters of artefactual and non-artefactual material spread around them. The quartz in these outcrops was generally of a low to moderate grade, tending towards blocky fracturing. It is unlikely that these outcrops were the targets of extensive reduction, rather exploited opportunistically as a matter of convenience. The locally occurring quartz was present in many of the rockshelters around the site.

A small amount of basalt, crystalline quartz, BIF, chert and silcrete artefacts not sourced from the immediate vicinity were also present within the caves and in the artefact scatters throughout the site. A single grindstone base was identified within the scatter in the north eastern corner of the site complex.

This place was recorded by Australian Interaction Consultants (2009) with the Widi Mob.

### Summary of Importance and Significance

DPLH 26808 MIOP 15 (Karara North Site Complex 01) has a lodged status on the register of sites as it is yet to be assessed under section 5 of the AHA. Therefore it is currently an Other Heritage Place.

From both a local and regional context, DPLH 26808 MIOP 15 (Karara North Site Complex 01) is considered to be of *high* archaeological significance. The site was in good condition at the time of viewing. It can potentially contribute a large amount of information to the understanding of Aboriginal people and their utilisation of the surrounding landscape. DPLH 26808 MIOP 15 (Karara North Site Complex 01) is an archaeological site; which in the opinion of the Horizon Heritage authors could constitute an Aboriginal site under section 5 (a) and (c) of the AHA.

The Australian Interaction Consultant (2009) report authors described the importance and significance of DPLH 26808 MIOP 15 (Karara North Site Complex 01) as; important to the archaeological signature of the Karara region. The area represents an area of intense occupation and resource exploitation, as evidenced by the extensive artefact scatters and rock shelters containing artefactual material. The site may represent a refuge area during milder summers, when water was still available late into the year, or perhaps a staging point for the exploitation of

the lithic resources in nearby Mt Karara and the Blue Hills during the wet, winter months. Much of the material represents a relatively intact and *in situ* record.

The potential for subsurface archaeological material within the rock shelters and the presence of charcoal seen eroding out of several of the caves raises the possibility of archaeological excavation as a means of adding further information to the understanding of this site. The archaeological significance of this site is *high* and it should be granted protection under Section 5 of the AHA. KML have indicated that they can avoid DPLH 26808 MIOP 15 (Karara North Site Complex 01).

**Table 22: DPLH 26808 MIOP 15 Significance assessment**

Measure of Significance	Minimal	Low	Medium	High
Cultural	No information	Non-specific importance	Specific importance	High / Restricted
Regional	Local	Regional	State	National
Uniqueness	Common	Uncommon	Rare	Unique
Scientific	None	Some interest to CRM	Some academic research potential	High research potential
Integrity	Heavily disturbed	Some <i>in situ</i> material	Mostly <i>in situ</i> material	No disturbance

## MANAGEMENT OF PLACE

- It is the preference of the Widi Mob that KML protects DPLH 26808 MIOP 15 (Karara North Site Complex 01) Aboriginal heritage site *in situ*. However, if future disturbance to DPLH 26808 MIOP 15 is unavoidable, then KML should discuss any requirement for Section 18 consent under the AHA with the Widi Mob.
- KML ensures its employees and contractors (as appropriate) are advised of the existence and location of Aboriginal archaeological site DPLH 26808 MIOP 15 (Karara North Site Complex 01);
- This location may be deemed a site under section 5 (a) by the ACMC and should be avoided to avoid any breaches of Section 17 of the AHA;
- If damage or disturbance to this site cannot be avoided, then the Widi Mob Traditional Owners have requested the opportunity to conduct surface salvage and sub-surface excavations (exposure, processing and recording of archaeological remains) within the rock shelters at DPLH 26808 MIOP 15 (Karara North Site Complex 01) to ensure the protection of objects, and to enable maximum information to be gained from the site. The deposits on the rock shelter floors may contain artefacts and site information which can add to the understanding of this site. This request is in line with;
- Australian Interaction Consultants (2009) in a previous heritage survey report with Widi Mob recommended that; any Section 18 Consent granted under the *Aboriginal Heritage Act (1972)* to disturb MIOP15 carry the condition of further sampling, test pitting, excavation and salvage to preserve as much of the archaeological record as possible. The archaeological research potential for MIOP15 (Karara North Site Complex 01) is highly significant and this site should be afforded protection under the AHA.

### 6.13 DPLH 26494 MIOP 18 (Karara West Gnamma 02)

DPLH 26494 MIOP 18 (Karara West Gnamma 02) is a gnamma hole located on an extensive granite outcrop. A small amount of gloss was present on the eastern edge of the gnamma hole and a large, broken capstone is present in the hole. Several isolated quartz artefacts were identified in the surrounding area, but not at sufficient density or demonstrable association to be recorded as a scatter. This place has a low archaeological significance.

This place was recorded by Australian Interaction Consultants (2009) with the Widi Mob.

#### Summary of Importance and Significance

DPLH 26494 MIOP 18 (Karara West Gnamma 02) has a lodged status on the register of sites as it is yet to be assessed under section 5 of the AHA. Therefore it is currently an Other Heritage Place. From both a local and regional context, DPLH 26494 MIOP 18 (Karara West Gnamma 02) is considered to be of *low* archaeological significance. The site is in good condition at the time of viewing. It can potentially contribute a small amount of information to the understanding of Aboriginal people and their utilisation of the surrounding landscape. DPLH 26494 MIOP 18 (Karara West Gnamma 02) is an archaeological site; which in the opinion of the Horizon Heritage authors could constitute an Aboriginal site under section 5 (a) of the AHA. KML have indicated that they can avoid DPLH 26494 MIOP 18 (Karara West Gnamma Hole 02).

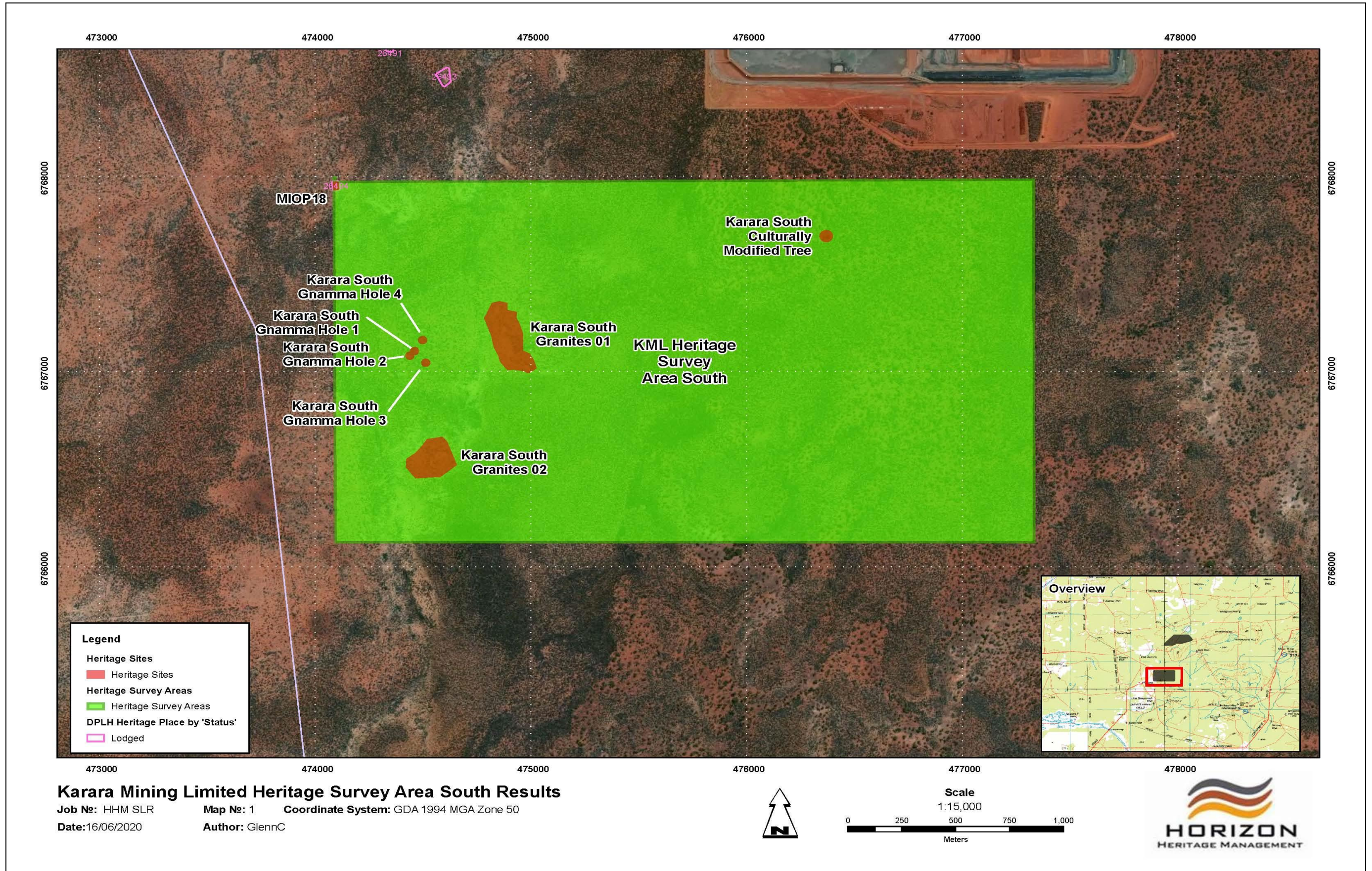
**Table 23: DPLH 26494 MIOP 18 Significance assessment**

Measure of Significance	Minimal	Low	Medium	High
Cultural	No information	Non-specific importance	Specific importance	High / Restricted
Regional	Local	Regional	State	National
Uniqueness	Common	Uncommon	Rare	Unique
Scientific	None	Some interest to CRM	Some academic research potential	High research potential
Integrity	Heavily disturbed	Some <i>in situ</i> material	Mostly <i>in situ</i> material	No disturbance

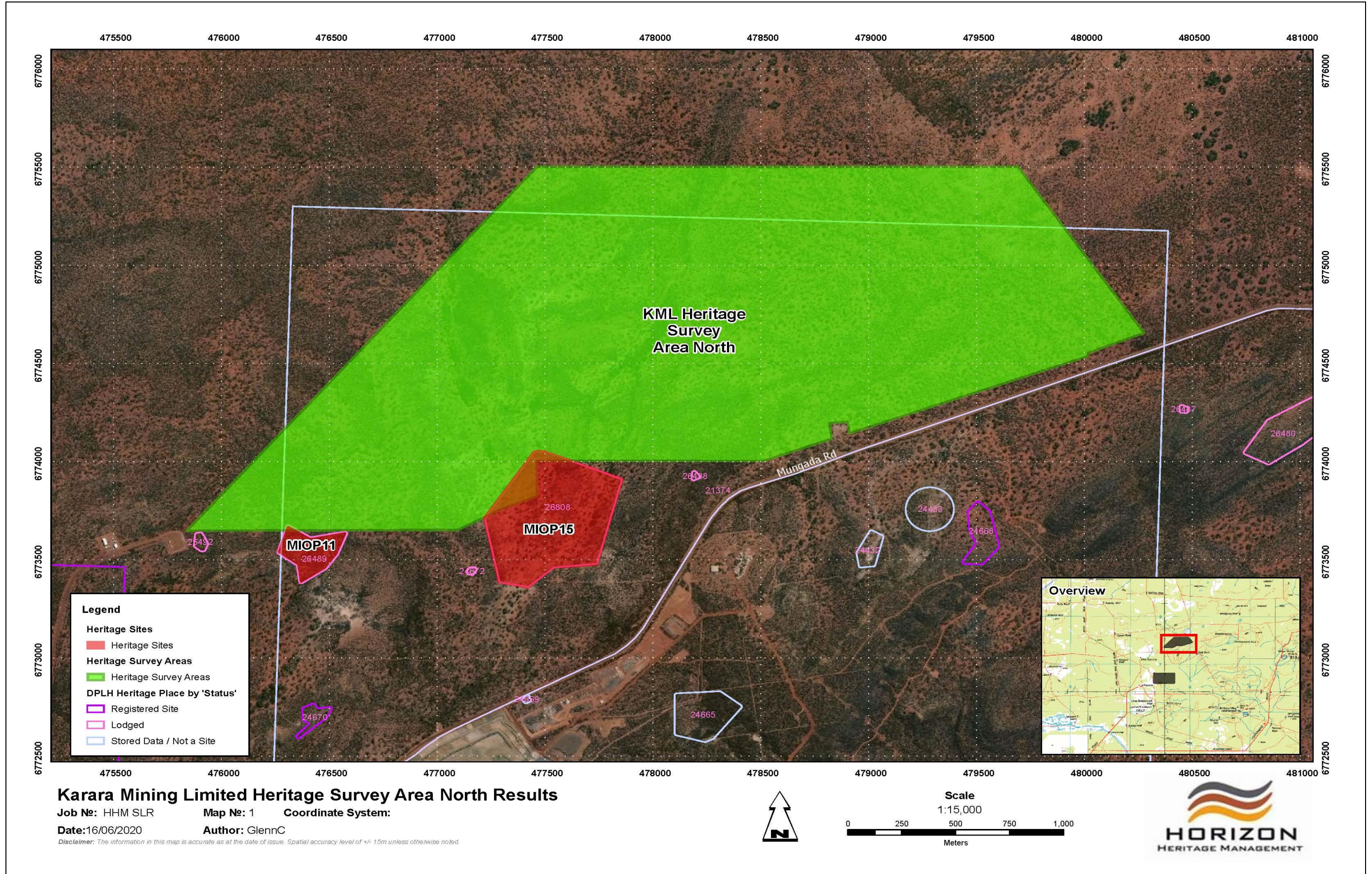
#### MANAGEMENT OF PLACE

- It is the preference of the Widi Mob that KML protects DPLH 26494 MIOP 18 (Karara West Gnamma 02) Aboriginal heritage site *in situ*. However, if future disturbance to DPLH 26494 MIOP 18 is unavoidable, then KML should discuss any requirement for Section 18 consent under the AHA with the Widi Mob.
- KML ensures its employees and contractors (as appropriate) are advised of the existence and location of Aboriginal archaeological site DPLH 26494 MIOP 18 (Karara West Gnamma 02);
- This location may be deemed a site under section 5 (a) by the ACMC and should be avoided to avoid any breaches of Section 17 of the AHA.

Map 7: KML Heritage Survey Area South Results



Map 8: KML Heritage Survey Area North Results



## 7 RESULTS DISCUSSION

On the whole, the distribution of the new sites appears to follow the proposal that resource utilisation in the Karara region was opportunistic and followed the availability of water. It is apparent that the artefact scatters and isolated finds tend to be located in close proximity to semi-permanent water sources: the majority of the background scatter and artefact scatters lie within proximity of some form of (mostly ephemeral) water sources.

This hypothesis was reiterated by the Widi Mob Traditional Owners who explained that their ancestors travelled through the landscape was largely dictated by water availability. Therefore the location of heritage sites near water may contribute to understanding patterns or routes of passage across the landscape. It can be proposed that sites displaying more intensive occupation, as evident at the granite features (grinding and artefact scatters), may indicate a more frequent use as seasonal sites along travel routes.

This is evidenced at Karara South Granites 01 and 02 (grinding and artefact scatters) where these site features are found in association with gnamma holes. The moderate density of the site suggests that occupation of the area was infrequent and visitational; most likely limited by the availability of water at the site.

The pattern of site location in close proximity to water indicates that the survey areas were likely to have been inhabited during certain periods of the year depending on weather conditions and the availability of water and raw materials.

Due to the close proximity of the granite features and gnamma holes to one another the Widi Mob Traditional Owners placed cultural significance on the intrinsic association between these sites. Any disturbance of these sites could cause great concern amongst the Widi Mob Traditional Owners. The disturbance of any site impacts not only its heritage value but also the integrity of the immediate cultural landscape.

Additionally, Widi Mob Traditional Owners expressed unease due to the possibility that the site disturbance may have detrimental health and wellbeing impacts on their people that identify with the area. The Widi Mob want to see impacts to Aboriginal sites limited to the practical extent possible if impacted at all.

A Widi Mob Traditional Owner Elder stated, *'Karara have to respect the purpose for which we have identified these sites as being relevant culturally, historically and traditionally and then make every effort not to damage them'*.

## 8 CONCLUSIONS

Horizon Heritage Management makes the following conclusions:

1. Aboriginal heritage site and places represent Australian history and it is important for current and future generations that they are conserved and protected.
2. The KML survey expansion areas are located wholly within land acknowledged under the *Native Title Act (1993)* as the Widi Mob. The Widi people are the custodians of this land.
3. The KML survey expansion areas are a culturally rich environment with clear indications that it has been utilised by Widi people in the past.
4. KML have completed their obligations under the *Aboriginal Heritage Act (1972)* and in line with the Widi Mob heritage agreement to assess the land for Aboriginal heritage sites or places that could be impacted upon by their proposed expansion activities.
5. The Widi Mob and Horizon Heritage identified seven new heritage sites; Karara South Granites 01, Karara South Granites 02, Karara South CMT and Karara South Gnamma Holes 1 through 4, within the southern expansion survey area.
6. Three previously identified Other Heritage Places; DPLH 26489 MIOP11 (Karara North Artefacts 02), DPLH 26494 MIOP18 (Karara West Gnamma 02) and DPLH 26808 MIOP15 (Karara North Site Complex 01) also partially fall within the expansion survey areas.
7. The seven new heritage sites and three previously identified Other Heritage Places may be deemed as sites under section 5 of the AHA and should be avoided to prevent any breaches of Section 17 of the AHA.
8. DPLH 21374 KARARA/02 - Mt Karara has been determined as 'Not a Site' under Section 5 of the AHA. No cultural heritage management of this Other Heritage Place is required.
9. KML has a requirement to fulfil their obligations under the *Aboriginal Heritage Act (1972)* as an ongoing process.

## 9 RECOMMENDATIONS

Horizon Heritage Management and the Widi Mob make the following recommendations:

1. KML endeavours to avoid the nine new and previously identified heritage sites and places; Karara South Granites 01, Karara South Granites 02, Karara South Gnamma Holes 1 through 4, DPLH 26489 MIOP11 (Karara North Artefacts 02), DPLH 26494 MIOP18 (Karara West Gnamma 02) and DPLH 26808 MIOP15 (Karara North Site Complex 01) located within the proposed expansion areas.
2. If KML is unable to avoid the nine new and previously identified heritage sites and places it must consult further with the Widi Mob Traditional Owners on any appropriate site management strategies in regards to mitigation, conservation, protection and any further research requirements under a Section 16 permit or Section 18 consent under the AHA.
3. KML is advised that the Widi Mob are satisfied to undertake salvage and relocation of newly identified heritage place Karara South CMT as an acceptable site management conservation and protection strategy.
4. KML as the custodian of heritage sites and places found on its tenements, should consider conducting physical audits of Aboriginal cultural heritage sites or places within their tenements with Widi Mob Traditional Owner involvement to identify any future preservation or conservation maintenance needs. Annual physical audits would allow KML and Widi Mob Traditional Owners to maintain and protect heritage assets on behalf of the wider community. Audits are beneficial to understand and plan for maintaining a heritage place or object.
5. KML should consider discussing at the next Widi Mob Liaison Committee meeting Aboriginal Cultural Awareness Training. This training fosters mutual respect and cultural understanding of Aboriginal people which underpins all aspects of the development of strong relationships with Traditional Owners.
6. The Widi Mob Traditional Owners have no issues with KML using existing historical exploration drill lines, tracks and pastoral tracks for access in the northern expansion survey area.
7. KML should advise the Widi Mob Traditional Owners of any modifications or updates to the proposed mine expansion works as explained during this survey.
8. In the instance of any previously unrecorded heritage sites or places being identified during the course of the expansion activities, KML must avoid the area and contact the Widi Mob Traditional Owners.
9. If human remains, skeletal materials that may be human or materials that may be a human grave, are uncovered within the cleared work area, KML and its contractors must stop work immediately and the materials and the area must be left undisturbed. The Widi Mob Traditional Owners and the Western Australian Police must be informed immediately.
10. KML keep the Widi Mob Traditional Owners informed of any further developments planned within their traditional country.
11. All KML staff and contracting personnel are made fully aware of their obligations under the *Aboriginal Heritage Act (1972)*.
12. If any doubts exist with the advice contained in this report KML should consult further with the Widi Mob Traditional Owners and or with the Department of Planning, Lands and Heritage.

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