

**Report to the Yawoorroong Miriuwung Gajerrong Yirrgeb
Noong Dawang Aboriginal Corporation of an Archaeological
Assessment of Locations Associated with Proposed Works at
the Sorby Mine Site, North of Kununurra, East Kimberley,
Western Australia for Kimberley Metals Ltd.**

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19th – 21st October 2011

Executive summary

This document details the results of an Archaeological inspection of locations associated with works proposed by Kimberley Metals at the Sorby Mine Site north of Kununurra in the East Kimberley, Western Australia.

The inspections were conducted in three days between 19th and 21st October 2011.

Results

The request clearance area delineated by waypoints 1 – 11 – 31 – 34 – 35 – 33 – 8 – 9 – 10 – 3 – 1 as defined on the maps in Appendices 2 and 3 is **cleared with the condition** that no work is conducted west of the green line extending between WP 11 – 33 as detailed on Map 1 Appendix 2 and with the following modification to the location of the green line:

Point 32 no longer exists, the new western boundary of the work area extends from WP 11 – 31 and continues to points 34 and 35 and then back to 33 as detailed in the GPS map 2 in Appendix 3.

Further details are provided in the Conditions and Conclusions section of this report.

Confidentiality

The information contained in this report should not be disclosed without the authority of the Miriuwung Gajerrong Prescribed Corporation and the Kimberley Metals.

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Disclaimer

To the best of the author's knowledge the information contained in this report is accurate. The author is not responsible for any additional information not disclosed whilst undertaking this project.

Terms and Abbreviations

DIA – Department of Indigenous Affairs.

GPS – Global Positioning System.

KLC – Kimberley Land Council.

MG - Yawoorroong Miriuwung Gajerrong Yirrgeb Noong Dawang Aboriginal Corporation

TO – Traditional Owner.

WPC – Work Program Clearance.

Acknowledgments

The author of this report would like to thank all those who participated in this WAC for their assistance before, during and after the clearance. Thanks to Lubor Hon for his assistance in the field and thanks to Dominique Reeves and Franklin Gaffney for their assistance in organising and coordinating all aspects of the clearance.

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1 Introduction

1.1 Background Information

At the Sorby Hills Mine Site, located approximately 50 kilometres north-east of Kununurra (Maps in Appendices 1 and 2) in the east Kimberly, Kimberley Metals are proposing to begin operating an open cut mine for silver, lead and zinc. As part of the works Kimberley Metals proposes to use land on M80/197 and M80/286 for the construction of office buildings, workshops, laydown areas, new haulage roads, tailings dumps and the open cut mine site. Full details of the mining proposal are provided in Appendix 1.

The area is heavily disturbed by previous mineral exploration and mining that has been conducted since the 1970 and into the 1980s. Approximately 900 exploration holes have been drilled in the region during this period. Historic and recent drilling pads along with associated access tracks are visible in many areas. In addition the area has been part of Carlton Hill Station and consequently has cattle yards, cattle watering troughs, a dam, loading ramp, water bores and extensive fencing and station tracks that have disturbed much of the area. Cattle still remain in the area now.

The Miriuwung Gajerrong Traditional Owners requested an archaeological Heritage Clearance be conducted before the new mine commenced. Kimberley Metals agreed with this suggestion to ensure there was nothing of archaeological significance in the area that would be damaged or disturbed during the mining activities. Numerous anthropological inspections have been conducted in the area but very little archaeological work has been conducted previously.

The author of this report was contracted by the Yawoorroong Miriuwung Gajerrong Yirrgab Noong Dawang Aboriginal Corporation (MG Corp) to conduct an Archaeological Work Program Clearance (WPC) to inspect the locations of the proposed works.

Dr Kim Doohan and Mr Joh Bornman were also engaged to conduct further anthropological work in the area with senior Traditional Owners. The results of that work are the subject of a separate report held by MG Corp (Bornman and Doohan 2011).

The Archaeological WPC was conducted over three days from Wednesday the 19th and Friday 21st October 2011.

1.2 Purpose of Investigation and Compliance

The WPC inspections which are the subject of this report were undertaken to assess the potential impact of the proposed work on known places of Aboriginal cultural significance and to identify and locate any previously un-recorded evidence of Indigenous cultural or spiritual significance which might impose constraints on the design or implementation of future work.

It is also intended that the WPC inspections and this report will assist Kimberley Metals to avoid damage, disturbance or interference with Aboriginal sites and objects protected under the *Aboriginal Heritage Act 1972*.

1.3 Aboriginal Heritage Act 1972.

Section 17 of that Act states it is an offence for:

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, 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.

2 Survey Area

2.1.1 Location

The survey areas are approximately 50 kilometres by road north-east of the township of Kununurra and approximately 2 kilometres west of the Northern Territory - Western Australia border. Kununurra is located in the East Kimberley approximately 100 kilometres south east of Wyndham and approximately 35 kilometres west of the Western Australian – Northern Territory border. The area is traditionally associated with the Miriwung Gajerrong Traditional Owners.

2.1.2 Environment

Despite being in the tropics Kununurra experiences a steppe climate, with the wet season from late November to March and the dry season from April to early November. The hottest month is November with an average maximum temperature of 39.5°C, and the coolest month is June with an average maximum of 31.0°C. The annual average maximum temperature is 35.6°C, one of the highest in Australia. Overnight temperatures rarely fall below 5.0°C and only fall below 10°C about once a week during June and July. In 1946 Wyndham, to the west, recorded 333 consecutive days of temperatures over 32°C. (www.bom.gov.au).

The mean annual rainfall is about 550mm, although there is considerable variation from year to year. Over 80% of the average annual rainfall occurs between December and March and is associated with thunderstorms and tropical lows or cyclones. It is not uncommon for very little rain to occur for many months. The median rainfall for the months of June to September is zero.

2.1.3 Vegetation.

Vegetation distribution in the eco-region is strongly associated with soil, geological factors, and the high rainfall. Dominant grasses are the tall grass species, especially Sorghum, Heteropogon, Themeda, Chrysopogon, Aristida, and Eriachne spp. Larger canopy trees included bloodwood eucalypts (*Corymbia* spp.) or, on deeper soils in higher rainfall areas, eucalypt-dominated woodlands with Darwin stringybark

(*Eucalyptus tetrodonta*) and Darwin woollybutt (*E. miniata*) and the smaller *Acacia* spp. (Beard and Sprenger 1984; Petheram and Kok 1983). Boab trees are found in the wide river valleys.

2.1.4 Geology.

The Kimberley region is an area of complex and diverse geology representing a time frame extending from ancient Proterozoic rocks formed more than 1800 million years ago, to the dune systems and sandstones of more recent times. In Devonian times (375-350 million years ago) a large part of the Kimberley was covered by a warm shallow sea with fringing coral reefs. Erosion, geological movement and varying sea levels have changed and sculptured these landform and, as the sea level has fallen to its present level, fossilised materials from old sea beds and coral reefs have been exposed by erosion to form Devonian reefs (Kimberley Development Commission www.kdc.wa.gov.au/kimberley/tk_geo.asp).

3 Field Survey Time Frame

The WPC was conducted in five days between the 19th – 21st October.

4 Methodology

4.1 Desk Top Study

Numerous papers and books discussing stone tool technology in the Kimberly have been written over the years. Some of those consulted for this report include (Akerman 1975, Akerman and Bindon 1995; Akerman et al. 2002; Holdaway and Stern 2004).

4.1.1 Regional Archaeological Research

Previous archaeological research in the wider Kimberley region has recorded Pleistocene occupation dates from between 40,000 and 30,000 years BP. Riwi (Mimbi Caves) was first occupied about 42,000 years BP (Balme 2000) and Widgingarri 1 and 2 on the coast north of Derby and Carpenter's Gap were occupied between 40,000 and 30,000 years BP (O'Connor 1999; McConnell and O'Connor 1997). Research at these sites also identified a long period of abandonment coinciding with a pattern of climate change and an expansion of the arid zone during the Last Glacial Maximum (LGM) (O'Connor 1999; Balme 2000). Widgingarri Shelters 1 and 2 and nearby Koolan Shelter 2, probably occupied by 30,000 years BP (O'Connor 1999:49), were several hundred kilometres inland during the LGM and, together with Riwi in the southern Kimberley, would have been well within the arid zone (Balme 2000:2-4, O'Connor 1999:49, 60). Recent research on the LGM suggests that the onset of this arid period may have been earlier in the arid zone areas and would have therefore influenced the abandonment of living areas because of the increasing scarcity of water and food (Wallis 2001). In addition, palaeobotanical studies at Carpenter's Gap 1 (near Windjana Gorge) found evidence of a reduction in trees and shrubs and an increase in grassland between 30,000 and 15,000 BP (McConnell and O'Connor 1997).

These archaeological sites are in the west Kimberley and are associated with river valleys, although climatic changes during the LGM would have been the same, if not similar in the East Kimberley. The Miriwun rockshelter was excavated by Dortch in 1971 prior to the inundation of the Ord River by the Ord Irrigation Scheme. Miriwun had a basal deposit dated to 18,000 years BP, the height of the LGM. The upper level contained an assemblage of small tools, but the lower levels, dated between 3,000 and 18,000 years BP, was a distinctive early assemblage that included thick, denticulated flakes, adze flakes, core-scrapers, small blades and, among the Pleistocene artefacts, a ground stone axe (Dortch 1972; 77; see also Jones and Bowler 1980).

4.1.2 DIA register of Aboriginal Sites.

A search of the Department of Indigenous Affairs (DIA) Aboriginal Heritage Inquiry System revealed a registered site, Jungil Complex, Site # K 02926 to the north of the Sorby Mine Site. The buffer zone of this site extends into the northern section of Tenements M80/286 and M80/197 but does not extend into the proposed work area. The map defining the relevant buffer zone and site identification numbers is attached in Appendix 6.

4.1.3 Previous Reports

There are a number of previous reports relating to WPCs in the area. These reports are held by MG, KLC and/or the DIA. It is apparent that most of these reports relate to Anthropological work conducted in the area. Hammond *et al* discusses archaeological inspections of areas to the east and west of the mine site but they did not inspect the proposed work areas related to this WPC. A review of those previous reports relevant to the current WPC is presented below.

Doohan, K. and Bornman J. 2010. *Kimberley Metals Ltd Sorby Hills Project M80/196, M80/197, M80/285, M80/286, M80/287 (Proposed) Heritage Site Redefinition Report to MG Corporation.*

This report discusses the boundaries of DIA Registered Site ID 15427, Site no K02926. It is clear from page 8 of this report that Traditional Owners gave permission for the 2010 drilling program to continue but stipulated further consultation must take place before any mining commences in the area. The report discusses anthropological issues but it is apparent that no specific archaeological survey was conducted.

Akerman, K. 2007. *Work Programme Clearances on the CBH Resources Ltd, Sorby Hills and Jeremiah Hills Mining Leases, Kununurra.* August 2007.

This report appears to have inspected the general area of the mine but no detailed description of the actual areas inspected during the WPC are provided. The importance of certain landscape features are discussed however there is no mention of the archaeology of the area.

Hammond, C., Greenfeld, P., Tonkin, N., Bunting, D., and Hook, F. 2004. *A Report of the Aboriginal Archaeological Assessment of the Ord River Irrigation Stage II Development Area (Priority Inspection Areas), near Kununurra, Western Australia for the Kimberley Land Council.* October 2004.

An extensive archaeological inspection of a large area that includes the Sorby Hills vicinity. Sample area SA 09 that was inspected as part of the survey is due east of the Sorby Hills but does not include the proposed mine site. The report provides general background archaeological information for the region.

Barber, K. and Rumley, H. 1998. *Work Program Clearance Report of the heritage Survey for the Proposed Wesfarmers, Marubeni and Water Corporation Stage One Works of the Ord River Irrigation Area (Stage2) Project.* October 1998.

Extensive anthropological report that mainly discusses areas to the north, east and south of Sorby Hills. Sorby Hills are mentioned but from an anthropological point of view rather than an archaeological perspective. The survey viewed and discussed the Sorby Hills from a distance but did not inspect the proposed work areas.

Turner, Jan. 1987. *Results of a survey to locate Aboriginal sites prior to installation of Telecom DRCS stations in Kununurra - Halls Creek Area, Kimberley, Western Australia*. May 1987.

As part of a larger Work Program the report discusses a site that was inspected north of Sorby Hills but does not include the proposed mine site. The report provides relevant general archaeological background information.

4.2 Field Survey

WPC team members conducted visual inspections of sections of each of the locations and a pedestrian survey of some sections of the proposed areas. Much of the area was inspected by driving through the areas and where points of interest were noted a walking transect was conducted to inspect the region. Thick vegetation covers much of the area making ground visibility difficult. It is possible the thick grass impeded the location of any artefacts that may have been present but this is unlikely considering the landscape is not conducive to Indigenous habitation sites.

4.2.1 Data Collection

Spatial data. A hand-held Garmin GPS was used to record the locations of all aspects of the Work Program Clearance Survey Request (see Appendix 3 for a GPS map and a list of all Waypoints).

Datum: GDA94; Zone reference: 52L

Photographic record. All locations were recorded using an Olympus digital SLR camera. See Appendix 7.

4.2.2 Field Survey Report

Tuesday 18th October 2011

After arrival in Kununurra the consultant met with Kim Doohan and Joh Bornman who were to conduct further anthropological work at the mine site, to discuss logistics for the following day. A second meeting was then conducted with Dominique Reeves – MG lawyer to further discuss the program and logistics.

It was agreed that the consultant would conduct a preliminary investigation of the area with two or three TOs the following day to determine exactly what areas required further archaeological investigation. Then on Thursday the consultant would return with TOs to inspect those areas believed to be a high priority for the location of archaeological material. At the same time on Thursday Joh Bornman would visit the area with senior men to ensure there were no men's issues that needed to be addressed. On Friday the archaeological inspections would continue if necessary. Also on Friday Dr Kim Doohan would visit the area with senior women to ensure there were no women's issues associated with the area that needed to be addressed. It was agreed the consultant would provide an archaeological report to MG and a separate anthropological report would be provided by Kim Doohan and Joh Bornman.

At the conclusion of the meeting the consultant met with Button Jones to arrange a time to conduct the preliminary inspection of the mine site area the following day. It

was agreed for the consultant to collect Mr Jones and Mr Ronny Carlton the following morning at 7:30am.

Wednesday 19th of October 2011.

After collecting Button Jones, Ronny Carlton and Mr Carlton's grandson Dion Jimala a meeting was held to explain the proposed Work Program Clearance. The team then met with Mr Lubor Hon, Sorby Mine Project Engineer, at the MG office. After further discussions the team travelled to the mine site.

On arrival at the mine site a meeting was held (Photo 1) to discuss the proposed inspection areas. It was agreed that Mr Hon would lead the team to each of the proposed work areas that are detailed on the maps and in Appendix 2. It was explained the main areas to be cleared included a plant site and mining infrastructure area that incorporated offices/workshops and lay down/storage sections. This area was delineated by the yellow box on the map. The next area, delineated by the pink boxes on the map, was a tailings dump area. The third area was the open cut mine site indicated by the red circles on the map. In addition there would be a new haulage road, access tracks and pipeline corridors constructed throughout the area.

Mr Hon explained he was unsure of the exact boundaries of the work areas but he requested the majority of the mining lease be inspected and cleared rather than just the areas indicated on the map. This would provide the company with alternative locations for their work areas if required. the TOs discussed that under no circumstances was there to be any work conducted in the actual Sorby Hills. Mr Hon explained that there was a green line marked on the map (Map 1 Appendix 2) and the company would not be conducting any work west of that line. There was one small hill (Photo 2) near the old quarry (Photo 3) and core storage sheds (Photo 4) that would be used for part of the mine infrastructure but no other hills would be touched. The remainder of the work areas and mine site were on the flat black soil plains to the east of the green line.

It was agreed to inspect the main areas delineated on the maps in Appendix 2 and make a final decision after the inspections. The team first conducted a visual inspection of the old quarry site (Photo 3) and the main infrastructure area delineated by the yellow line on Map 1 Appendix 2. It was explained that the majority of the entire area within the yellow line on the maps in Appendix 2 would require clearing to allow new office blocks, workshops, lay down areas, storage areas, etc. to be built. It was noted and discussed that the majority of this area was highly disturbed from previous mining works, cattle yards, vehicle tracks, fences and ongoing station activities.

The team then inspected the location of the old mine site (Photo 5) before continuing to the location of the new tailings dumps (Photo 6) delineated by the pink lines on the maps in Appendix 2. This area was located on black soil plains that once again had been highly disturbed from previous and current drilling programmes conducted since the 1970s. It was explained that the majority of this area would require excavating to approximately 3 m and it would be then filled with mine tailings to height of approximately 3 m above the existing ground level. Once again Mr Hon was unable to identify the exact boundaries of this area.

The team then continued to the approximate location of the southern boundary of C Pod of the new open cut mine site (Photo 7). The team then drove to the eastern boundary E Pod of the proposed new mine site and then continued to northern boundary of E Pod of the mine site (See Maps in Appendix 2 for Pod locations).

It was then decided to continue to the main Weaber Plain road and drive to the north eastern corner of the mining lease (WP 10 Map 2 Appendix 2) to understand the extent of the proposed clearance area.

The team said they were familiar with the area and did not believe there was anything significant on the black soil plains in this section of the Tenement. All agreed that there were no issues with the majority of the area providing the company did not extend the mine or any works into the Sorby Hills. Mr Hon reiterated that there was no mining west of the green line delineated on the maps in Appendix 2. Mr Hon once again restated that he was unsure of the exact boundaries of all the clearance areas but it was agreed he would provide the exact coordinates of the proposed areas after returning to the office. This would allow the selected TOs and consultant to return tomorrow to inspect and map the actual area with a GPS. This would allow the location of the green line to be inspected to ensure it was sufficiently far enough away from the Sorby Hill and they would not be affected. An archaeological inspection could then be conducted of as much of the area as possible to the east of the green line.

The team returned to Kununurra arriving at approximately 1pm. It was agreed the consultant would collect Dion Jimala and another young man the following morning to assist in a pedestrian survey of the clearance area where possible.

After returning to Kununurra the consultant met with Dominique Reeves to discuss the extension to the proposed clearance areas. Ms Reeves explained that her understanding was that the clearance was only supposed to include the areas delineated by the yellow and pink lines and the mine site to the east of the green line. However Ms Reeves then explained that MG Corp had no issues with the proposed extension to the clearance areas providing the Traditional Owners agreed with the extra area being cleared. The consultant confirmed that the TOs present on the day agreed to the extra area but it also needed to be discussed further with the other senior male and female TOs inspecting the area over the next two days.

The consultant then met with Kim Doohan and Joh Bornman to apprise them of the proposed extension to clearance area. It was agreed that the consultant would meet with Mr Bornman at the mine site tomorrow to further discuss the extension to the proposed clearance areas with the senior men.

Thursday 20th of October 2011

At 7 am the consultant attempted to collect Dion Jimala and others to assist in the archaeological survey but nobody was available to attend for the day. The consultant then met with Joh Bornman, Button Jones, Ronny Carlton, David Newry and Vincent Bilminga.

It was agreed Mr Biminga would travel with the consultant to assist in the archaeological survey and the remainder of the team would travel with Mr Bornman to discuss any anthropological issues relating to the area.

On arrival at the mine site a meeting was held to discuss extension to the clearance areas requested by Mr Hon yesterday. It was explained that Mr Hon had provided the actual waypoints to the consultant the previous evening (Map 2 Appendix 2 and Maps in Appendix 3). The consultant had downloaded the waypoints into his GPS the previous evening. Throughout the day Mr Biminga and the consultant would track the location of the waypoints provided by Mr Hon to ensure that no areas of significance were going to be encroached upon by the proposed mining activities.

All agreed with the suggestion so the consultant accompanied by Vincent Bilminga proceeded with their inspection while Mr Bornman accompanied the remainder of the team on their inspection of the proposed work areas.

For the remainder of the day the consultant and Mr Vincent Bilminga traversed the proposed areas but no archaeological material was located. This was not considered surprising because the majority of the area was located on black soil plains that are largely considered unsuitable for Aboriginal occupation. Some quartzite hills in the area would have provided suitable material for stone tool construction but no evidence was found to support this theory.

In addition most of the area has been highly disturbed by previous drilling programmes and cattle grazing. Mr Hon had explained that over 900 drill holes had been drilled in the region over the previous years. The drilling pads and associated access tracks required for the drilling programs would have necessitated the clearing of much of this land so any archaeological evidence that may have been present would be destroyed or buried.

Whilst following the green line in the vicinity of Waypoint 31 a limestone hill was located (Photo 8). It was considered unacceptable to include this hill within the cleared area so the green line was detoured around this point. The detour around the hill extends from Waypoint 31 to Waypoint 34 to Waypoint 35 and back to the Green line at Waypoint 33. Waypoint 32 is excluded from the clearance area (see Map 2 in Appendix 3 for further details).

After traversing much of the proposed work areas the consultant and Mr Vincent Bilminga return to Kununurra at approximately 2pm.

After arrival at Kununurra the consultant met with Mr Joh Bornman to discuss the clearance progress. Mr Bornman explained that the senior men that he had consulted with during the day had agreed to clear the extended request area and all but one had signed the clearance map in Appendix 5. Vincent Bilminga also agreed to clear the extended request area before he signed the clearance map.

The consultant discussed the progress with Mr Hon later that afternoon. It was agreed to meet the following day at 7:30 am to provide details of the detour in the western boundary indicated by the green line and the progress of the WPC to the senior women who were to accompany Kim Doohan on their inspection of the area. It was

agreed the consultant would then accompany Mr Hon to show him the exact location of the detour around the limestone hill the following day.

Friday 21st October 2011

The consultant met with Kim Doohan, the senior women and Mr Hon at 7:30am. The consultant showed the team a GPS map that he had downloaded onto a laptop the previous evening. The map detailed where Vince Bilminga and he had inspected the previous day including the details of the western boundary detour around the limestone hill in the vicinity of WP 32.

It was agreed the consultant would meet Mr Hon at the mine site after the women had conducted their survey so he could show him the exact location of the limestone hill. The consultant continued to inspect sections of the proposed clearance areas whilst waiting for Mr Hon and once again no archaeological evidence was located.

After showing Mr Hon the location of the limestone hill he agreed that it should not be a problem for the company to exclude the hill from the work area. He would discuss the exclusion further with Management to confirm but believed it would not be an issue. (It was later confirmed via email [See Correspondence in Appendix 4] that the Kimberley Metals had agreed to exclude the hill from the work area).

After inspecting the hill it was arranged to conduct a final meeting with all consultants and Mr Hon at 2 pm at the MG office. At the final meeting it was agreed the area delineated by waypoints 1 – 33 the maps in Appendices 2 and 3 was cleared with the condition that no work is conducted west of the green line and with the following modification to the location of the green line:

Point 32 no longer exists, the new western boundary of the work area commences from point 31 and continues to points 34 and 35 and then back to 33 as detailed in the GPS map in Appendix 3.

Dr Doohan explained that the women had inspected and cleared the extended clearance area and had all signed the map earlier. Each of the consultants and Mr Hon signed the clearance map presented in Appendix 5.

5 Conditions and Conclusions

No archaeological material was located in the areas inspected during the WPC. However, all mining personnel should be made aware that all Aboriginal material culture is protected under the Aboriginal Heritage Act and it is an offence to damage or destroy any artefacts or sites located. It is possible that sites may be located during the proposed works and if so work must stop immediately until the site can be assessed by a professional Archaeologist or Anthropologist.

The request clearance area delineated by waypoints 1 – 11 – 31 – 34 – 35 – 33 – 8 – 9 – 10 – 3 – 1 as defined on the maps in Appendices 2 and 3 is **cleared with the condition** that no work is conducted west of the green line extending between WP 11 – 33 as detailed on Map 1 Appendix 2 and with the following modification to the location of the green line:

Point 32 no longer exists, the new western boundary of the work area extends from WP 11 – 31 and continues to points 34 and 35 and then back to 33 as detailed in the GPS map 2 in Appendix 3.


It is **requested** that any work opportunities generated by the proposed works be given to the local Traditional owners.

It is **recommended** that an Aboriginal Cultural Awareness Program is implemented by Kimberley Metal Ltd for all mining personnel who will be working on the Sorby Hills Mine Site.

6 Endorsement

In accordance with the advice of the survey team members and their directions in this matter I verify that this report and the survey which was conducted prior to its compilation, were completed in accordance with the wishes of the Native Title parties and that this report is a true and correct record of the decisions which were made.

I believe I have made all the inquiries and included all the information I believe relevant and appropriate to identifying and describing Aboriginal sites and objects located within the survey area, consistent with my area of expertise and in accordance within the obligations of my Agreement.

Signed.....
Greg Carver
Archaeologist

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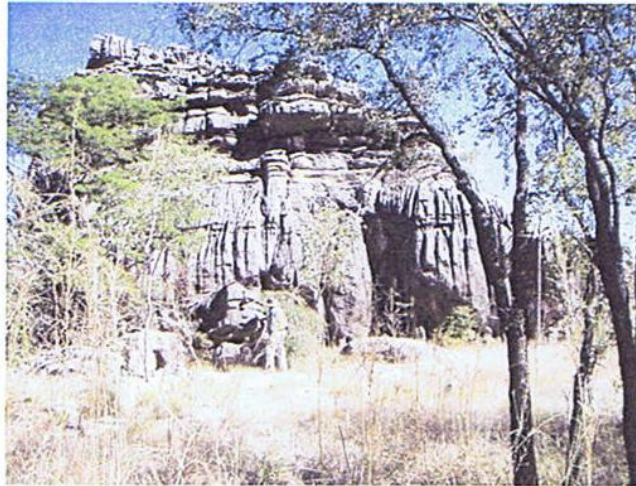
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8 Appendix 1. Mining Proposal.

MINING PROPOSAL

SORBY HILLS SILVER LEAD ZINC PROJECT

KIMBERLEY, WESTERN AUSTRALIA



NOVEMBER, 2011

**MINING PROPOSAL FOR THE CONSTRUCTION AND
OPERATION OF THE SORBY HILLS SILVER LEAD ZINC
PROJECT MINE SITE**

Tenements M80/197 & M80/286

Prepared by Sorby Management Pty Ltd with the assistance of Animal Plant Mineral Pty Ltd

This Mining Proposal relates to activities on tenements M80/197 and M80/286.

1.1 Project Overview

Sorby Hills is a major undeveloped Silver Lead Zinc (Ag Pb Zn) deposit; the primary Lead mineral is Galena. The Sorby Hills mining leases contain 13 separate but adjacent mineralised ore pods within the platform carbonate rocks of the Burt Range Formation in the Bonaparte Basin. The ore pods form a linear belt (trending north – south) over 8kms long and up to 1km wide on the eastern margin of the Pincombe Inlier. The deposits have been well defined by extensive exploration.

The shallow nature of the deposits allows for extraction of ore by open cut mining. The Sorby Hills project covers an area of 1782.27ha (tenements M80/197 and M80/286). The project will initially consist of three open cut pits, comprising ore pods C, D and E, which are to be mined sequentially as separate entities, however as mining progresses the three ore bodies will be contained within one larger pit; the focus will be on resources within 70m of the surface. The ore will be processed by flotation and a concentrate produced for export through Wyndham. In addition to the open cut the project will consist of a ROM pad, waste dumps, haul roads, a mill and concentrator, laboratory, road train loading area, tailings dam, access roads, workshop, site office and laydown facilities at Wyndham Port.

400,000 – 600,000Tpa of ore will be excavated from the open pits and processed through the facility to produce 45,000Tpa of concentrate for export to the overseas market. Concentrate will be transported to Wyndham Port via road trains; there will be a maximum of 20 truck movements per week with an average of 12 trucks expected. SMPL are planning to utilise existing Wyndham Port facilities and ship once a month for 11 months each year; shipping consignments will contain approximately 4,000t of concentrate.

The Sorby Hills project will have a very significant impact on the community of Kununurra where SMPL (and subcontractors) will employ and accommodate site personnel. In addition, employment opportunities will be created at the Wyndham Port which may benefit the community of Wyndham. SMPL maintain a high degree of community focus and will develop the Sorby Hills project in line with best practise, community, environmental and safety standards.

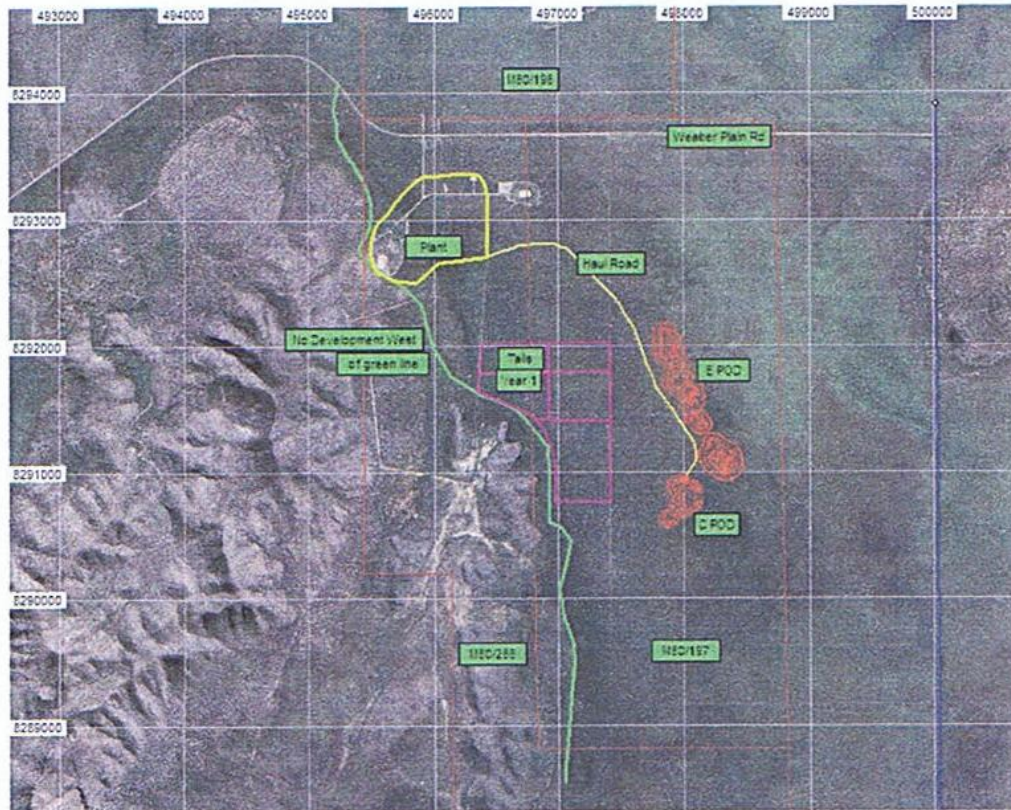
Critical dates for Sorby Hills include:

December 2011	Feasibility
April 2012	Project approvals
May 2012	Commence construction
December 2012	Commissioning
First Quarter 2013	Production
2027	Closure

1.2 Location and Site Layout Plans

Sorby Hills is situated in the north-east Kimberley region of Western Australia close to the Northern Territory border. The Sorby Hills mine site is located approximately 50km by road north-east from the regional centre of Kununurra. The relevant Sorby Hills tenements lie to the east of the currently proposed Ord River expansion stage two, with a common boundary on the north-western edge of the Sorby Hills Project (tenement M80/196). A location map is provided as [Plan X](#).

Detailed site layout plans for the Sorby Hills Project Site are provided as [Plan X](#). This plan illustrates the location and scale of site infrastructure (overlaid on aerial photography and topographic data), along with key aspects of the existing environment such as vegetation communities, creeks and drainage lines, major topographic features and heritage site locations.



1.3 History

The Sorby Hills deposit was discovered in 1971 by Elf Aquitaine. The project area was extensively and systematically explored for carbonate hosted lead and zinc deposits during the 1970's and 1980's by Mr Aquitaine with various joint venture partners. The exploration focused on delineating economic Lead and Zinc resources within the platform carbonate lithologies of the Bonaparte Basin.

Exploration consisted of geochemical surveys, various geophysical surveys and extensive drilling. Base of Overburden geochemical sampling by auger or RAB drilling was used very effectively over most of the project area; the programs targeted the prospective stratigraphy along the main Sorby trend in all of the current mining leases to some extent. Geophysical surveys were used comprehensively. The most effective methods for delineating mineralisation and structure were gradient array and dipole-dipole Induced Polarisation surveys, of which there is complete coverage over the main Sorby trend. Drilling programs at Sorby Hills have been quite intensive and comprehensive; approximately 888 holes were completed for ~95,000m from 1972 to 1988, of these drill holes approximately 374 were diamond holes.

Post 1990 little work was completed and the project was shelved in the late 1990's due to uncertainty surrounding the Ord River expansion scheme. In 2006 CBH Resources Ltd (CBH) reactivated the Sorby Hills project; In 2007 CBH commissioned a review of the economic potential of the Sorby Hills deposits which suggested that the deposits had potential for economic extraction. The results lead to a new phase of exploration which included a desktop review of historic data, a small scale diamond drilling program (13 holes), construction of a wireframe resource model and conceptual mining study. KML acquired the Sorby Hills Project in 2008 and entered into a joint venture agreement with HYG&L for the project in 2010; in late 2010 a 99 hole Reverse Circulation and Diamond drilling program was completed. The joint venture partners wholly own Sorby Management Pty Ltd (SMPL), the proponent currently managing the Sorby Hills Project.

The Sorby Hills project area is situated on land that was once covered by pastoral leases and as such pastoral tracks, cattle yards and other limited infrastructure is present on the tenements. At present cattle graze in the project area but the land will be de-stocked prior to mining. Some remnant disturbed areas and access tracks plus a core storage area are present on the Sorby Hills mining tenements from previous exploration.

1.4 Existing Facilities

There is little infrastructure currently on site. There is an access road linking the Sorby Hills site to the Weaber Plain Road, as well as pastoral and exploration tracks across the tenements. The limited infrastructure includes cattle yards, a dam, water and production bores, a small cattle loading ramp, a diesel pump, a core storage area and some disturbed areas and pads resulting from previous exploration. It is planned to utilise these existing degraded areas for the project's Plant site and other support infrastructure.

SMPL plan to utilise the Weaber Plain Road, Victoria Highway and Great Northern Highway to haul concentrate from the Sorby Hills Mine Site to the laydown facilities at Wyndham port. There will however be minimal utilisation of other public services for the project. Power will be generated on site and water will be sourced from mine dewatering and recycled water from the processing plant.

2 EXISTING ENVIRONMENT

2.1 Regional Setting

The Sorby Hills project area is situated at the north eastern extent of the Sorby Hills Ranges. Tenement M80/286 encompasses a portion of the Ranges and associated foot slopes; to the east of the hills in tenements M80/286 and M80/197 the environment is predominantly broad flood plains of red/grey clay pan (cracking clay) soils with Bohemia trees. Floodwaters draining off the eastern rangelands flow south east towards Knox Creek, however residual water bodies can remain present for extended periods at the base of the ranges.

Mapping for the Interim Biogeographic Regionalisation for Australia (IBRA version 6.1) programme placed the Sorby Hills project area in the Victoria Bonaparte Bioregion. This bioregion comes under the Tropical and Subtropical Grasslands, Savannas and Shrublands Ecoregion which stretches across northern Australia into northern NSW. The Victoria Bonaparte Bioregion continues into the Northern Territory as far as Bradshaw (Department of Sustainability, Environment, Water, Population and Communities, 2011). Within the Victoria Bonaparte Bioregion the vegetation over lowland parts of the survey area has been mapped as 'Tussock grasslands' while upland areas come under 'Tropical Eucalyptus woodland/grasslands'. Tussock grasslands covered an estimated 631,088ha (8.7%) of the bioregion prior to European settlement. By about 1997 this area was little changed at 631,032ha (8.7%). Tropical Eucalyptus woodland/grasslands covered an estimated 4,696,792ha (64.6%) of the bioregion prior to European settlement. By about 1997 this area had been slightly reduced to 4,678,368ha equating to 64.4% (Australian Government, 2011).

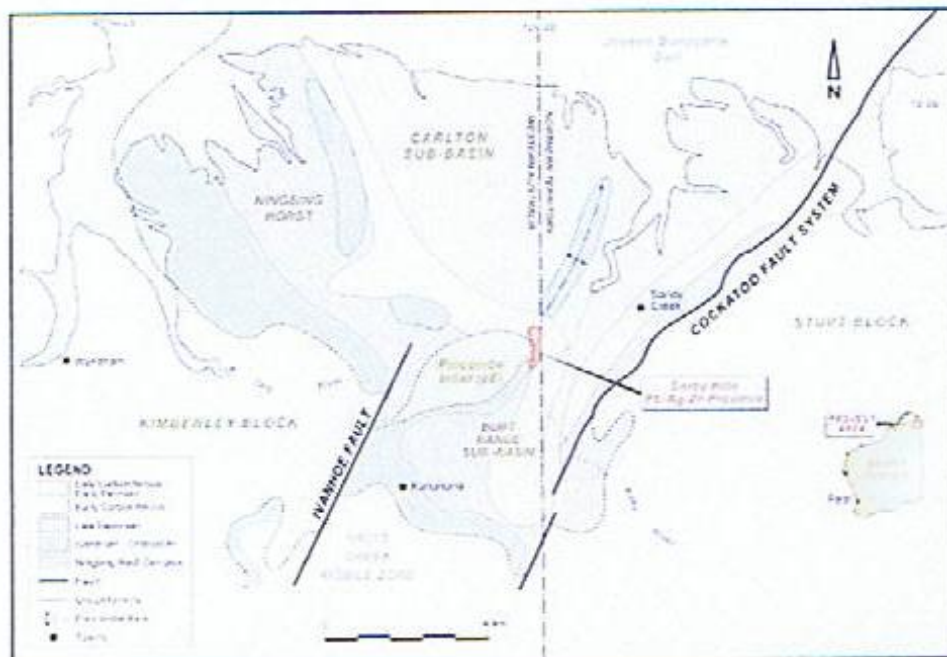
The project area lies in the Gardner Botanical District within the Northern Botanical Province of Western Australia (Beard, 1975) and encompasses the Pinkerton and Ivanhoe Land Systems (Department of Agriculture and Food, 2009).

2.2 Geology

The Sorby Hills mineralisation consists of thirteen discrete carbonate hosted Ag Pb Zn deposits (pods), Pods A – J, Beta Pod East, Beta Pod West and Alpha pod. The pods form a linear north – south belt extending over 8km, sub parallel to the eastern margin of the Pincombe Inlier and within the Burt Range Formation of the Bonaparte Basin.

The Bonaparte Basin unconformably overlies the north eastern margin of the Proterozoic Kimberley block. It is a northward-opening basin (Figure 2-1) of which 10% is currently above sea level; the sediments vary from Cambrian to Tertiary in age. The oldest part of the onshore basin is the Antrim Plateau flood basalts which unconformably overlies the Palaeoproterozoic basement of the Hall's Creek orogen. Clastic sediments of the Late Cambrian and Ordovician Carlton Group locally overlie the basalts, after which there is a period of non-deposition and/or erosion from the Ordovician to the Middle Devonian. The onshore basin is dominated by Middle Devonian to early Carboniferous carbonate and clastic sediments, commencing with the Frasnian Cockatoo Group, dominated by sandstones (quartz arenites). During the Famennian, mixed carbonate-clastic sedimentation deposited the Ningbing Group reef complex and the Buttons Formation in the Sorby area. Reef growth was terminated in the Carboniferous, when shelf carbonates and clastics of the Tournaisian Burt Range Formation were deposited in the Sorby area. The Tournaisian carbonates are overlain transgressively by Viséan basinal black shales of the Milligans Formation. Above this there is an unconformable contact with the Carboniferous – Permian Kutshill Group composed of fluvio-glacial sandstones.

Figure 2-1: Geological setting of the Sorby Hills mineralisation



There are two important structural trends in the Sorby area, a major set of north east trending faults and an antithetic set of north west trending faults. The north east trending faults are parallel and contiguous with the basement trends in the Pincombe Inlier, and are the major basin-bounding faults. The set includes the Ivanhoe Fault on the western margin and the Cockatoo Fault system on the eastern margin (Figure 2-1). The north west trending set is typified by a large north west trending fault that cuts across the northern part of the prospect area. It is interpreted to form the northern boundary of the Pincombe Inlier. Smaller deposit-scale faults with similar trends are interpreted to control mineralisation within several pods.

The carbonate sequences of the Burt Range Formation are pervasively dolomitised in the area of the Sorby Hills deposits. Dolomitisation has been described to both precede and accompany mineralisation, as mineralisation commonly has dolomite spar gangue. The pods are dominantly shallow dipping stratabound lenses within dolomitic intraclastic and tectonic breccias of the Burt Range Formation. The lenses average 7-10m in thickness, are generally less than 1km long and are 100 to 500m wide. There is some structural control to the mineralisation, with higher grade zones associated with faulting. The pods also appear to sub parallel the two main fault trends.

The Sorby Hills mineralisation is typically lead rich with moderate to high pyrite content and generally low amounts of sphalerite. Galena occurs as massive to semi massive crystalline lenses often in more argillaceous units. The galena occurs as coarse to fine disseminations or as open-space fill in fractures, breccias and vugs. Sphalerite typically predates galena and occurs as colloform open-space fill. Silver values tend to increase as the lead content increases. The upper portions of the deposits are often oxidised and are composed of a variable mix of cerussite and galena.

3 PROJECT DESCRIPTION

3.1 Area of disturbance table

The Sorby Hills Mining Act tenure area covers 12,612.40ha, with this proposal covering an area of 1,782.27ha (tenements M80/197 and M80/286) with a total disturbance area of XX ha.

Table 3-1 indicates the clearing requirements for each tenement associated with the Sorby Hills Mine Site.

Table Error! No text of specified style in document.-1 Indicative areas of disturbance table.*

DISTURBANCES (Ha)	M80/197	M80/286
Open Pits	84 ha	-
Tailings Facilities	125 ha	22 ha
Evaporation area	34 ha	49 ha
Waste Dumps (sulphide present, highly erodible, >25m high)	Waiting for info from Adam	Waiting for info from Adam
Waste Dumps (lower risk)	Waiting for info from Adam	Waiting for info from Adam
ROM Pad	-	4 ha
Plant site and mining infrastructure including office/workshops	-	60 ha
Strip mining (backfilled mining voids)	Pits will be backfilled.	Pits will be backfilled.
Hypersaline pipeline corridors (>15,000TDS)	-	2.2 ha (2.2km x 10m)
Fresh water pipeline corridors (<15,000TDS)	2.5 ha (2.5km x 10m)	1 ha (1km x 10m)
Haul roads	12.5 ha (2.5km x 50m)	5 ha (1km x 50m)
Access Tracks	6 ha (1.5km x 40m)	12 ha (3km x 40m)
Hardstand areas	-	Included in Plant Site

Comment [APM1]: These will be temporary – planning to push all waste back into pits

Comment [APM2]: Ultimate land use in closure is agriculture

Landfill Site		2 ha
Historical and areas mined by previous operators		6.6 ha
Total	TBC	TBC
Tenement Area	993.91	788.36

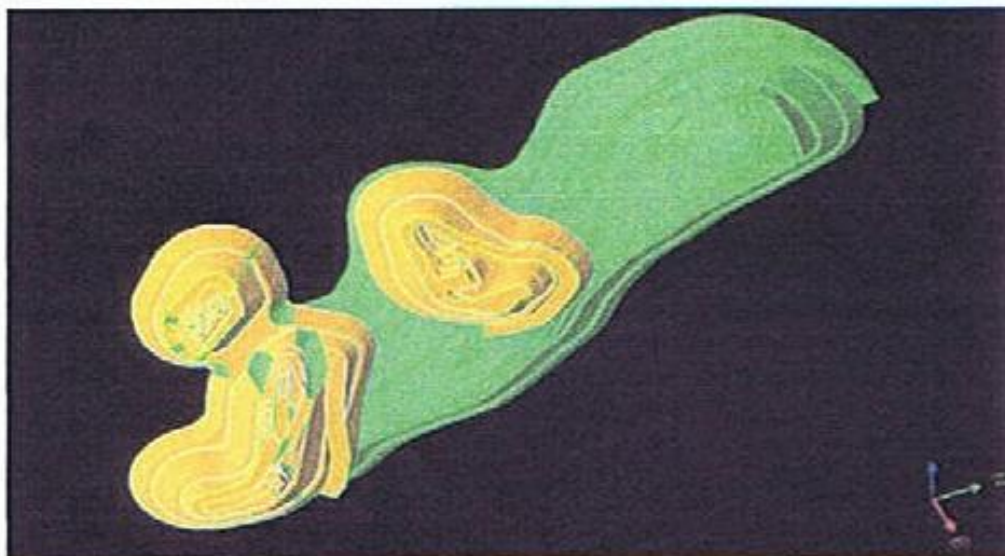
*Areas are indicative only and may vary slightly.

3.2 Mining operations

The Sorby Hills mining operation for the C, D and E pods is planned over a period of 14 years at an ore production rate of 400,000 – 600, 000 tonnes per annum. The mining technique will be consistent with a typical open cut, drill and blast operation.

Initially the C, D and E pods will be mined sequentially as separate entities in three small pits; as mining progresses the three ore bodies will be contained within one larger pit. A 3D modelling image of the final pit design, showing the three separate ore bodies in one pit, is provided in Figure 3-1.

Figure Error! No text of specified style in document.-2 Sorby Hills C, D and E Pod Final Pit Design Model



All mining operations will be carried out during dayshift only; the mining technique will consist of:

- Overburden (topsoil and clay) removal; two D10 dozers, four 631 scrapers and one 16H grader will be utilised for this purpose.
- Drill and blast operation to drill, load and blast in pre-defined patterns. Drill crew and plant will consist of a single blast hole drill rig (Sandvick DP1100) with operator, one bomb ute and shot firer and an explosives mobile manufacturing unit (MMU) with operator. Blasting will only take place at designated blast times during dayshift and only when conditions are favourable. Explosives will be stored in an explosives magazine in compliance with the

Explosives and Dangerous Goods Act 2004, the Dangerous Goods Safety (Explosives) Regulations 2007 and Australian Standard AS 2187.1:1998, Explosives – Storage, transport and use, Part 1. Explosives will be stored remote from the mining operations.

- Site geologist and pit technicians will assess broken (blasted) ground to identify and delineate ore, low grade material and waste prior to load and haul commencing in the area.
- The load and haul mining fleet will include a 120 tonne excavator loading four 90 tonne haul trucks, which will transfer ore, low grade material and waste to the respective stockpile areas. Extraction will be predominantly carried out using conventional mining technique, however top loading may be required in some instances, for example in tight areas of the pit or if the pit floor becomes too wet for conventional mining due to rain or dewatering issues. Ore and low grade material will be trucked along the haul road and tipped on the run-of-mine (ROM) pad. Waste material will be stockpiled in designated areas on the eastern edge of the open cut to facilitate backfilling of the pit during rehabilitation.
- The mining fleet will also include support machinery; a 35kl water cart will be required for dust suppression, a grader (140H) will be utilised for general earthworks and maintenance of the truck circuit and a 40 tonne excavator will be on site to pull and maintain the batters, excavate drains and in pit sumps, and provide backup for the 120 tonne excavator.

The overburden in the project area consists of black soil and is approximately 10m in thickness, shallow slope angles of 20 - 25° will be used in this material. The first bench immediately below the black soil cover will be designed as a wide accessible bench; this will be necessary for cleaning as the black soil material will accumulate on the bench and create a hazard. Once into the hard rock below the soil cover the slope angles will be adjusted to a 40 - 45° angle and will be consistent with a typical pit design.

3.3 Ore processing

The processing plant at the Sorby Hills Mine Site will comprise the following components;

- ROM pad and crusher loading facility;
- Primary and secondary crusher, screens and associated fine ore bins;
- Grinding circuit comprising a sag mill and a ball mill;
- Flotation circuit, including flotation tanks, pumps and pipe work; and
- Associated infrastructure including a thickener, electrical switch room, backup generators and diesel storage area.

A flow diagram of the ore treatment process is presented as Appendix

The Mine Site ROM pad will be used to stockpile ore and low grade material prior to processing; material will be delivered by haul trucks and stockpiled according to the material's characteristics. Ore material from these stockpiles will be fed into the crusher hopper using a front-end loader. If required the material will be blended either through creation of secondary stockpiles or during crusher loading operations.

The feed material will be initially crushed using a primary jaw crusher before reporting to a screen; oversize material will be sent to a secondary cone crusher prior to being passed back to the screen. Undersize material from the screen, namely material with a diameter nominally less than 10mm, will

be passed via a conveyor to the fine ore bins for further processing. The capacity of the crushing circuit is approximately 500,000tpa based on 24 hour operations.

Ore material will then be fed from the fine ore bins into the grinding circuit which will comprise two ball mills with diameters of 2.44m and 2.92m. Water will be added to the fine ore material as it enters the ball mills.

Following milling, ground ore material will be mixed with water and passed to the flotation circuit. The ore-water slurry will be mixed with a range of industry standard reagents (Table 3-2); the slurry and reagent mixture will then be passed to a series of tanks where air is blown through the substance. Selected sulphide materials will adhere to these air bubbles, float to the surface and be skimmed off to form a concentrate. The concentrate to be produced by the Sorby Hills operations is of Ag Pb Zn composition. Following skimming the concentrate product will be dried in a filter press and packaged directly into fully sealed and lockable containers for short term on site storage and subsequent transport off site. The tail from the flotation circuit will report to the tailings storage facility. The flotation circuit and filter press are contained within covered concrete bunded areas.

3.4 Concentrate Handling

SMPL endeavour to achieve minimal handling of concentrate by utilising a predominantly mechanised system. Concentrate will be packaged at the final stage of the processing circuit; the concentrate will be dried in a Filter Press and expelled directly into shipping containers (there is no requirement for internal bags or packaging). The Filter Press and container loading dock will be situated within a covered concrete bunker.

SMPL propose to use "Rotainer" shipping containers for the collection, storage and transport of concentrate (Figure 3-1). "Rotainer" containers are purpose built, stackable, bulk ore containers that can be fully sealed with lockable lids.

Figure 3-1 Rotainer Container to be used for the Collection, Storage and Transport of Sorby Hills Concentrate.



Once the containers have been filled to the desired level with concentrate they will be removed from the loading dock and a lid immediately applied and locked. The sealed containers will then be transferred to a designated hardstand area within the Plant site for short term storage prior to transportation off site. "Rotainer" containers carrying concentrate will be transported from site to Wyndham Port via road train.

The Sorby Hills concentrate has a high specific gravity (SG) and is therefore a heavy substance; containers will only be half filled and will be stacked two high as a maximum due to their weight. Load cells will be installed in the loading dock to control the quantity and weight of concentrate placed into each container. SMPL will utilise approximately 180 – 200 containers for the Sorby Hills operation.

An existing hardstand area with wash down facilities and sumps at Wyndham Port will be utilised by SMPL for container storage. The "Rotainer" containers are designed to be handled by ship cranes and can therefore be easily manoeuvred into position over the ships hold and the contents unloaded by rotation of the container (Figure 3-2). The smooth internal surfaces of the containers enable the contents to be easily emptied with minimal residue remaining. Shipping will be undertaken by a specialist contractor.

Figure 3-2 Rotainer Container attached to a Ships Crane depositing contents into Hold.



Any out of specification product reclaimed from the sumps at the hardstand area and wash down facilities will be collected and back hauled to the Sorby Hills processing facilities in sealed "Rotainer" containers.

Appendix Flow sheet

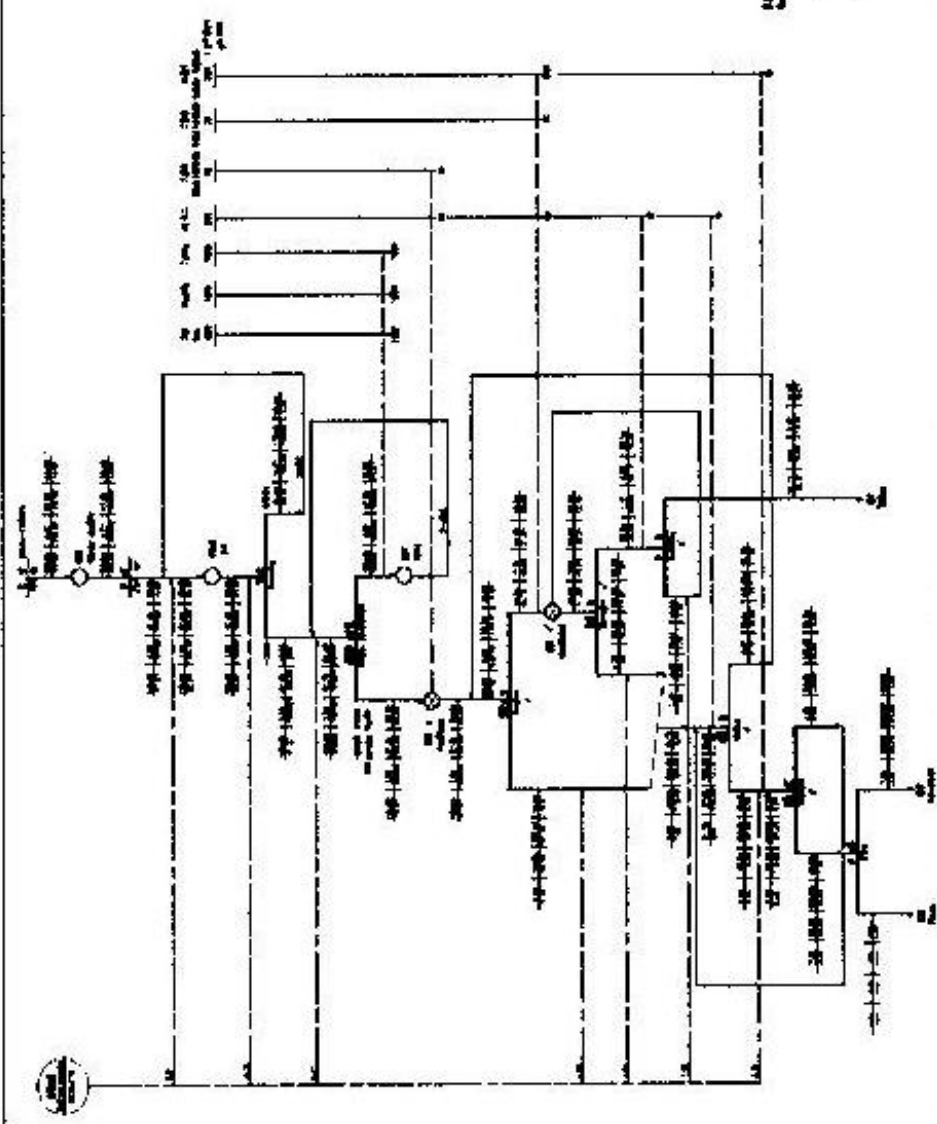
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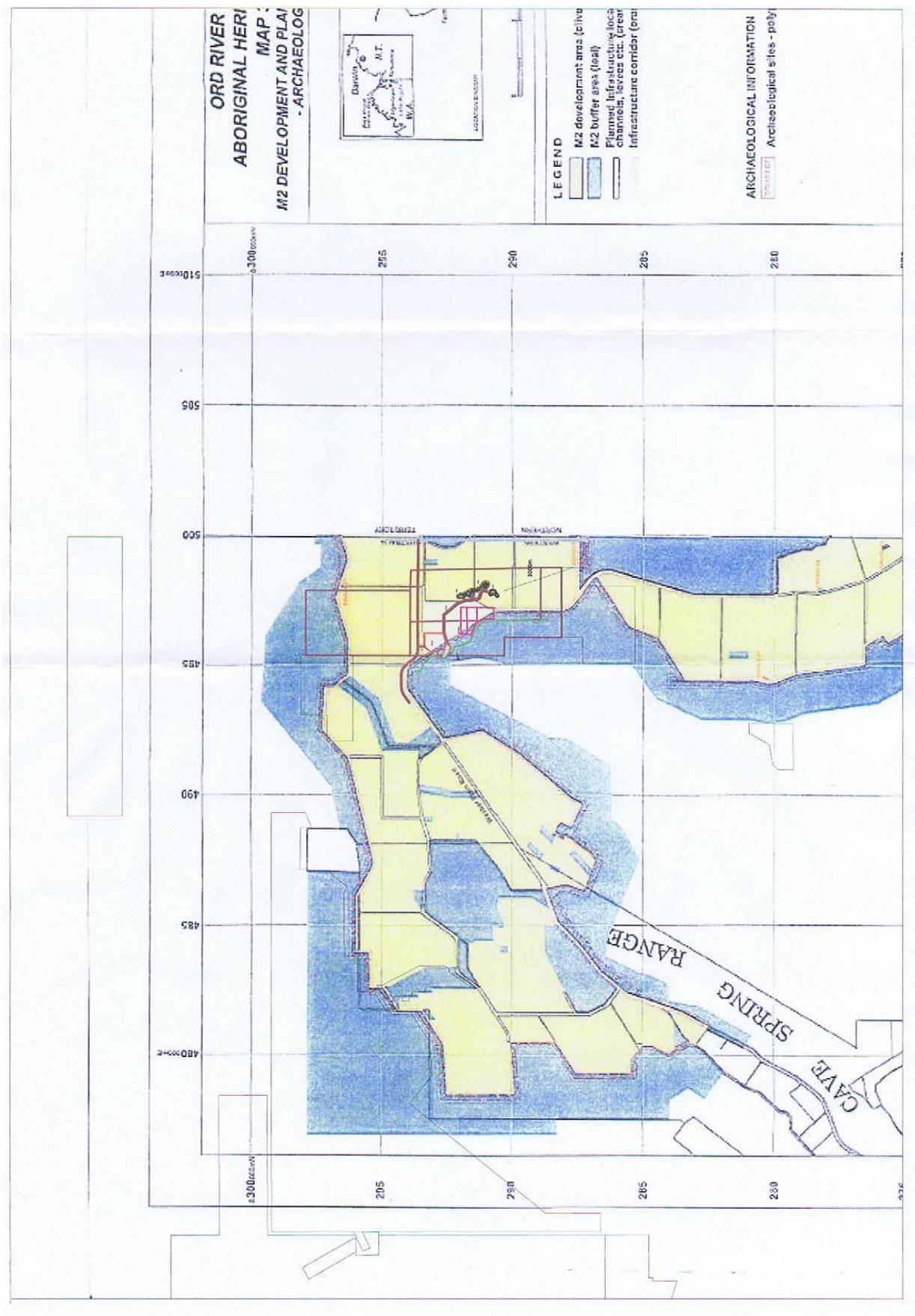
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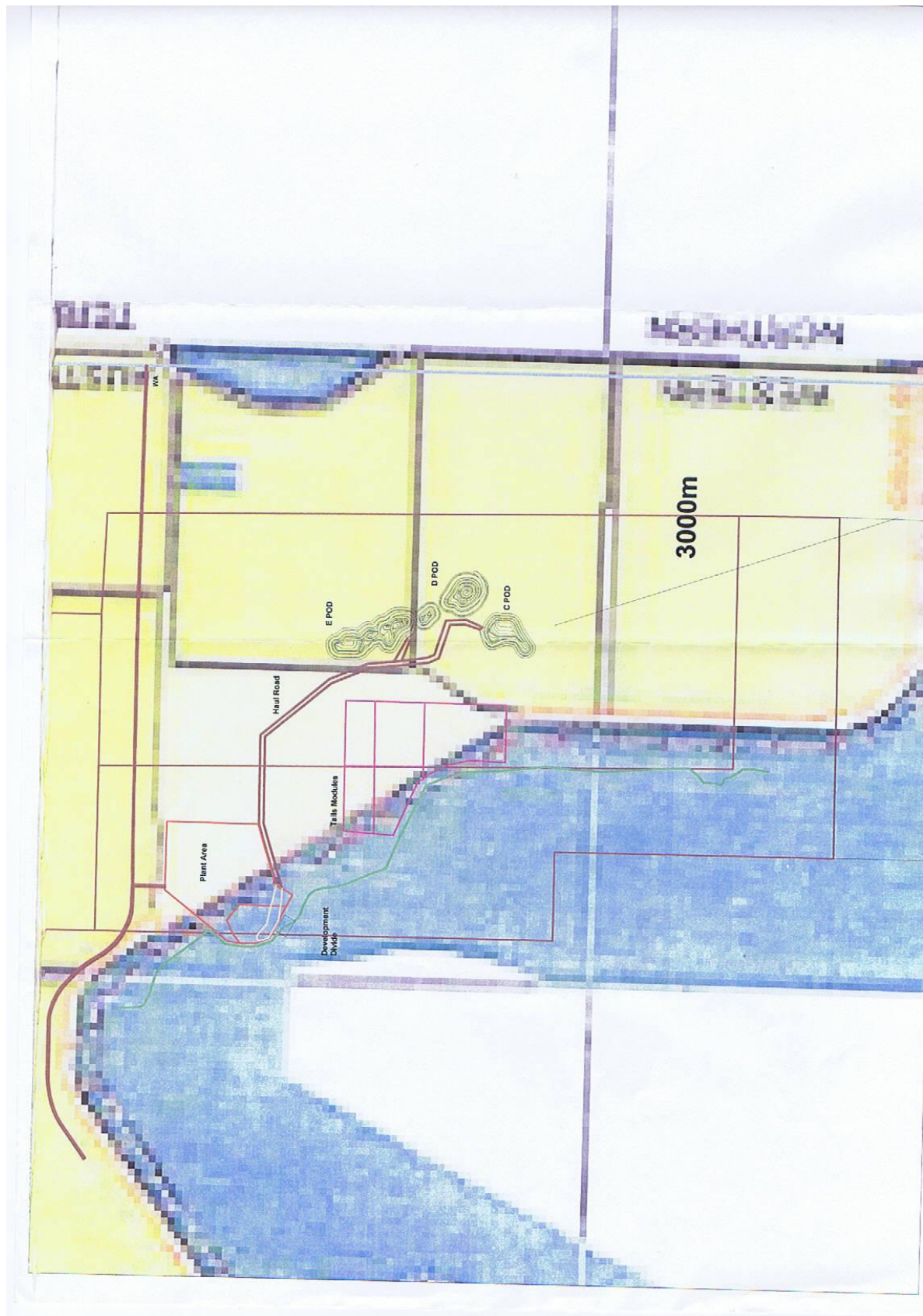
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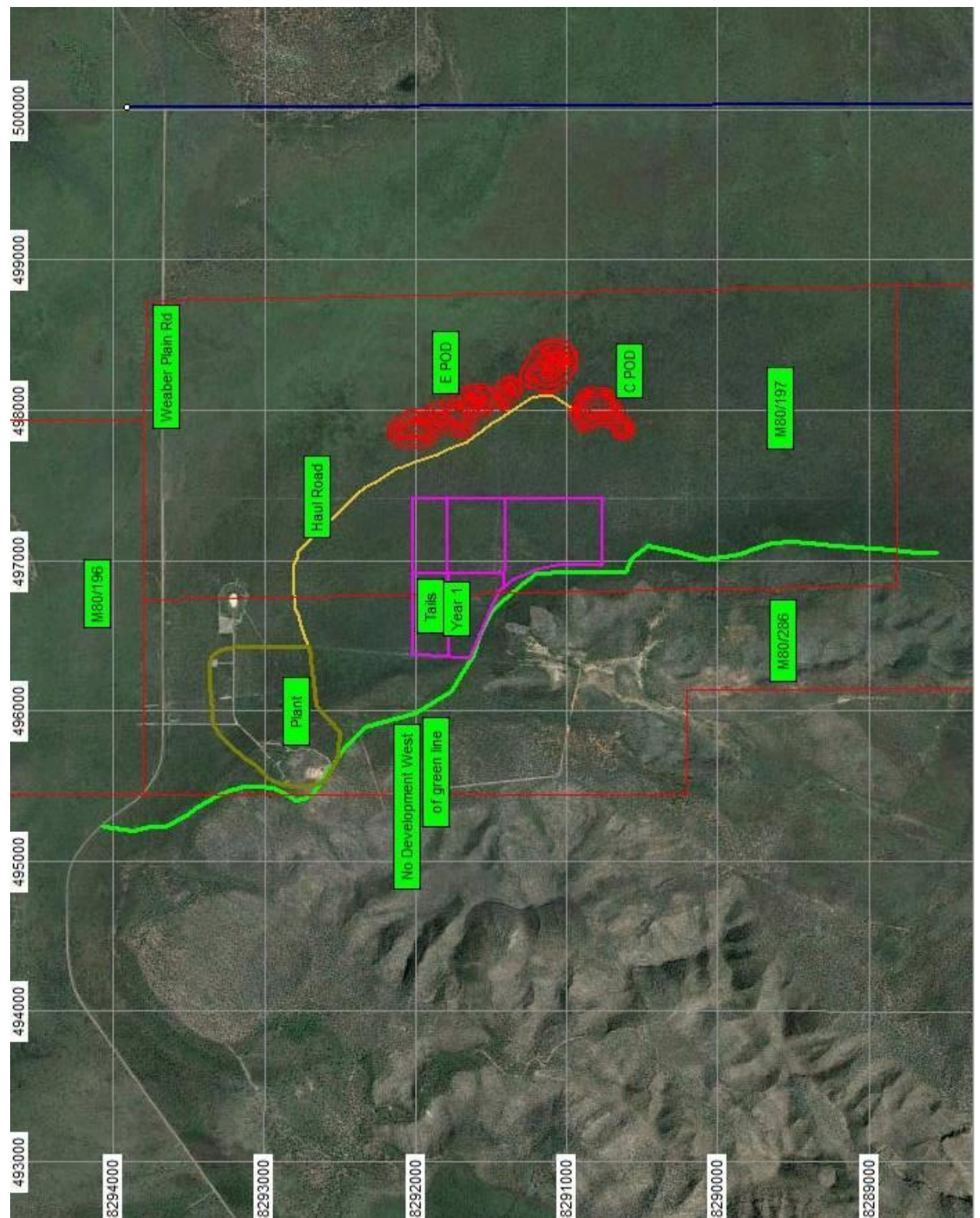




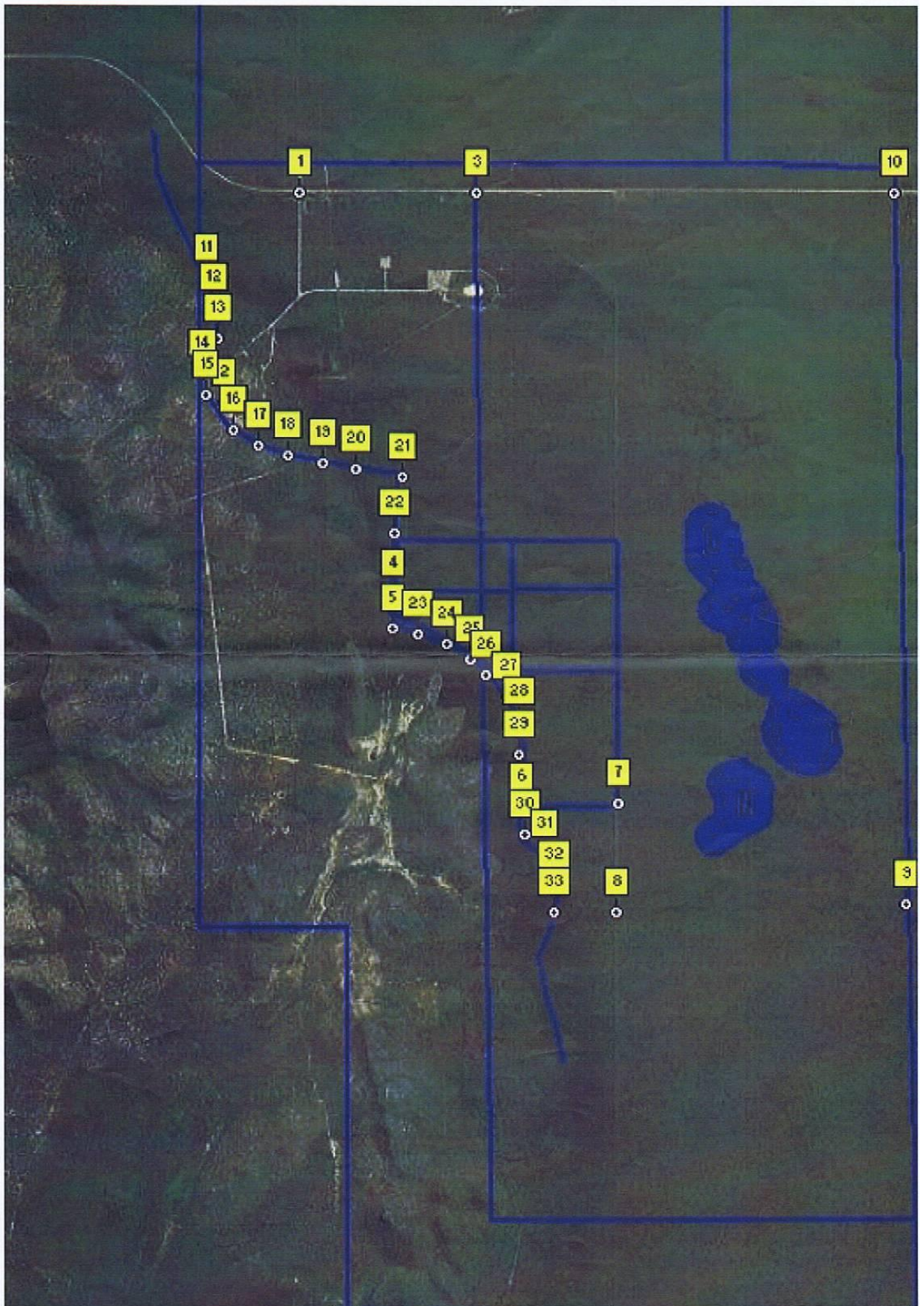


9 Appendix 2. Work Program Maps.

9.1 Map 1.

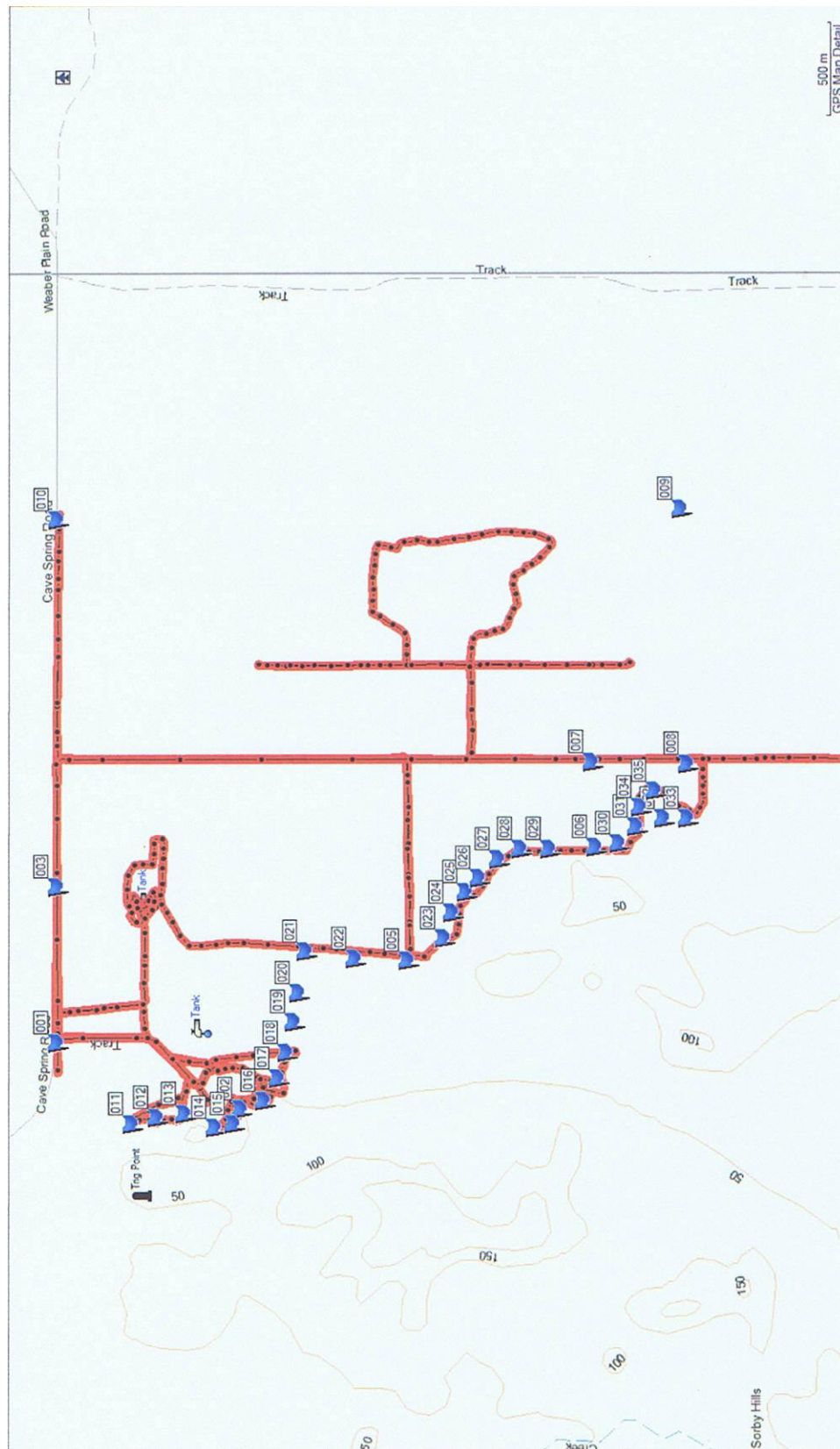


9.2 Map 2. Detail of Extent of Cleared Areas.

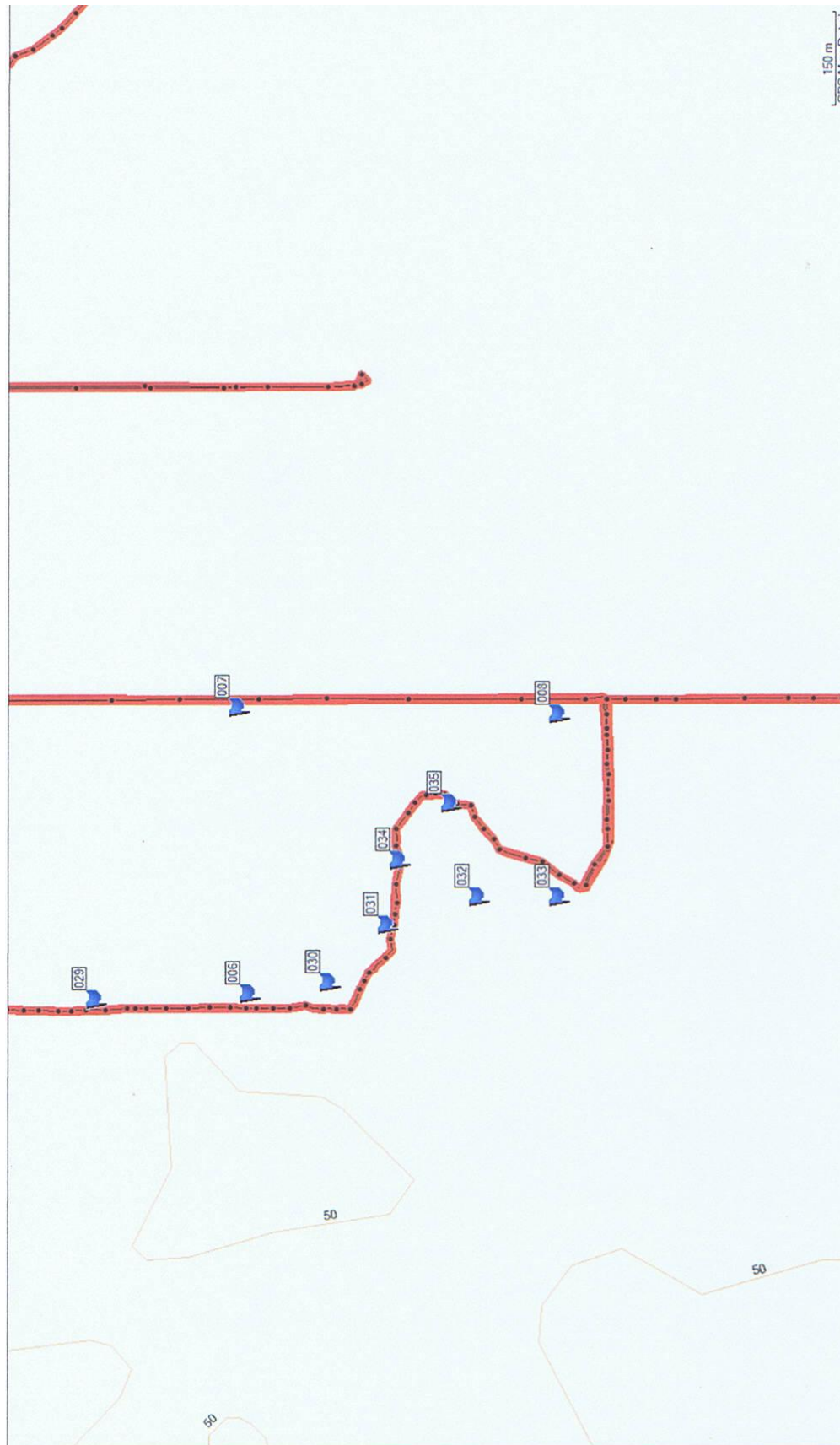


10 Appendix 3. GPS Maps and Waypoint List.

10.1 Map 1. All tracks traversed.



10.2 Map 2. Detail of modification of western boundary of work area.



10.3 WP List.

001	52 L E495912 N8293658
002	52 L E495553 N8292670
003	52 L E496750 N8293659
004	52 L E496354 N8291773
005	52 L E496354 N8291773
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007	52 L E497423 N8290785
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011	52 L E495470 N8293256
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013	52 L E495525 N8292972
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031	52 L E497073 N8290547
032	52 L E497119 N8290401
033	52 L E497119 N8290273
034	52 L E497177 N8290528
035	52 L E497269 N8290445

11 Appendix 4. Correspondence.

Date: Sunday, October 23, 2011 12:33 AM
From: Lubor Hon <LuborHon@kimberleymetals.com.au>
To: grcarver@bigpond.com <grcarver@bigpond.com>, min2pela@bigpond.com <min2pela@bigpond.com>
Subject: Clearence for Sorby Hills project

Kim, Joh and Greg,

As discussed yesterday I talked to the project manager and he had confirmed that Kimberly Metals has no objections to the agreed modification regarding the west boundary.

Regards,

Lubor Hon

Project Engineer – Sorby Hills Project

Sorby Management Pty Ltd

Kununurra, WA

Mobile: 0438 773 969

12 Appendix 5. The Obverse Side of Signed Map 1.

20th October *Boone*
 21st October *Boone*
Boone
Boone
Boone

BUTTON JONES

Vincent BILMINGA

Julie Bilmonga

ROZANNE BILMONGA

RONNIE CARLTON

9916
NA

Stephanie Boombi

All cleared with the following modification:
 point 32 no longer exists, the new western
 boundary of the work area commences
 from point 31 and continues to points 34
 and 35 and then back to point 33 as
 detailed in Carver 2011 and noted in
 Bornman and Dodson 2011 (October)

13 Appendix 6. Registered Sites Search for M80/197 and M80/286.

Search Criteria

1 sites in mining tenement 'M 8000197'.

Disclaimer

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Legend

Restriction	Access	Coordinate Accuracy
N No restriction		Accuracy is shown as a code in brackets following the site coordinates.
M Male access only	C Closed	[Reliable] The spatial information recorded in the site file is deemed to be reliable, due to methods of capture.
F Female access	O Open	[Unreliable] The spatial information recorded in the site file is deemed to be unreliable due to errors of spatial data capture and/or quality of spatial information reported.
	V Vulnerable	

Status

L - Lodged		IA - Information Assessed		ACMC Decision Made
Information lodged, awaiting assessment		Information Awaiting ACMC Decision Assessment Only		R - Registered Site I - Insufficient information S - Stored Data

*Explanation of Assessment

Sites lodged with the Department are assessed under the direction of the Registrar of Aboriginal Sites. These are not the final assessment.

Final assessment and decisions will be determined by the Aboriginal Cultural Material Committee (ACMC).

Spatial Accuracy

Index coordinates are indicative locations and may not necessarily represent the centre of sites, especially for sites with an access code "closed" or "vulnerable". Map coordinates (Lat/Long) and (Easting/Northing) are based on the GDA 94 datum. The Easting / Northing map grid can be across one or more zones. The zone is indicated for each Easting on the map, i.e. '5000000:Z50' means Easting=5000000, Zone=50.

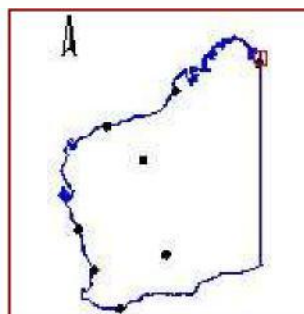
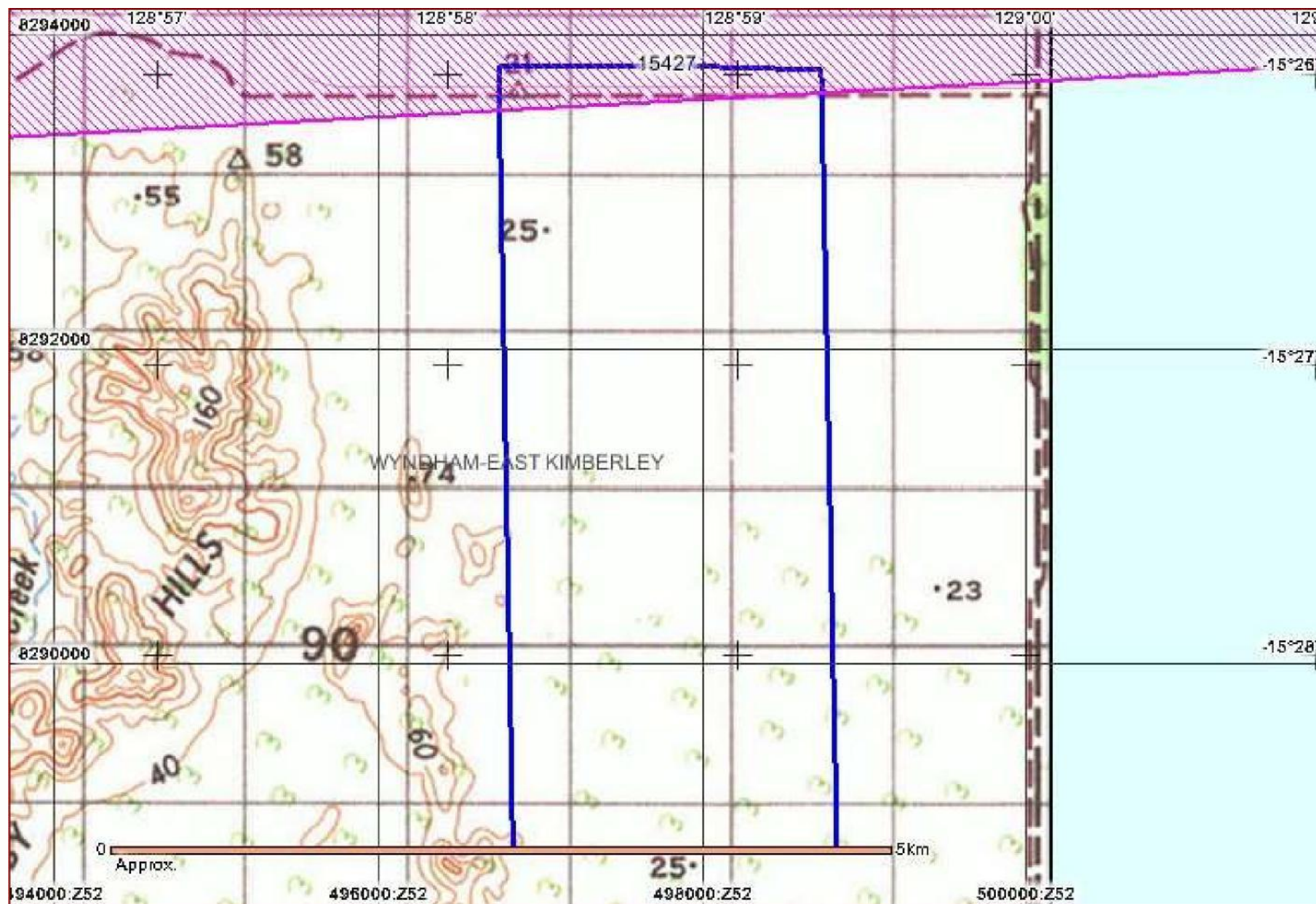
Sites Shown on Maps

Site boundaries may not appear on maps at low zoom levels



List of 1 Registered Aboriginal Sites with Map

Site ID	Status	Access	Restriction	Site Name	Site Type	Additional Info	Informants	Coordinates	Site No.
15427	R	C	N	Jungil Complex.	Ceremonial, Mythological, Repository / cache, Skeletal material/Burial, Man-Made Structure, Modified Tree, Painting, Engraving, Quarry, Artefacts / Scatter, Midden / Scatter, Grinding patches / grooves	Ochre	*Registered Informant names available from DIA.	Not available for closed sites	K02926



Legend

Selected Heritage Sites

- Registered Sites
- Town
- Map Area
- Search Area

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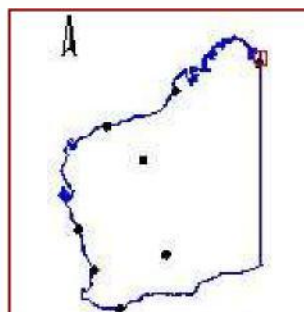
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List of Other Heritage Places with Map

No results



Legend

Selected Heritage Sites

- Other Heritage Places
- Town
- Map Area
- Search Area

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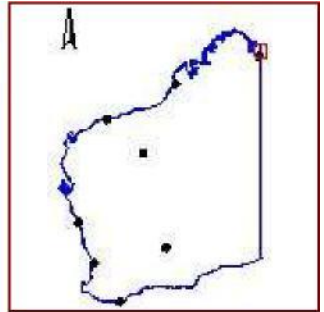
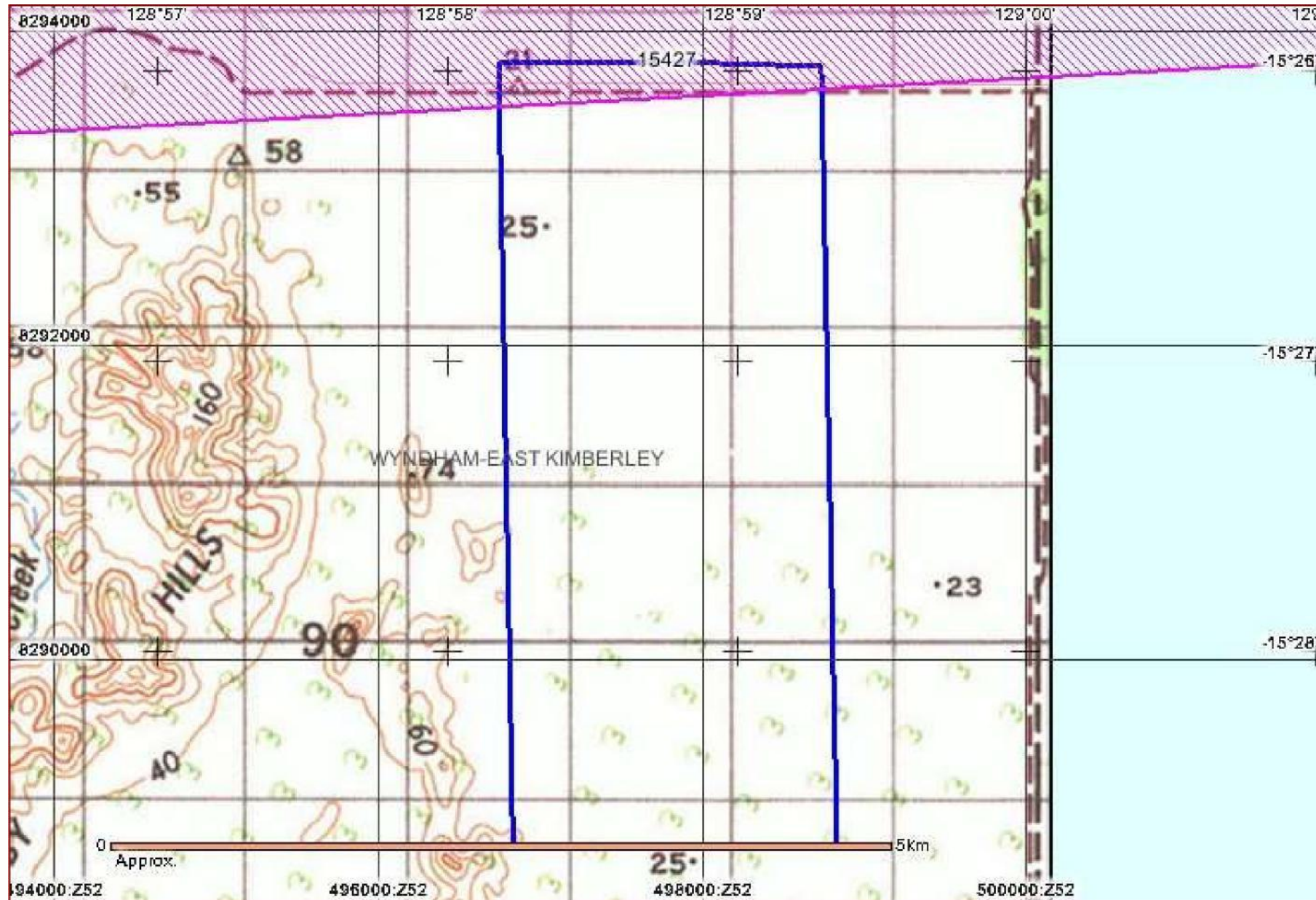
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Map Showing Registered Aboriginal Sites and Other Heritage Places



Legend

- Selected Heritage Sites**
- Registered Sites Other
 - Heritage Places
 - Town
 - Map Area
 - Search Area

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Search Criteria

1 sites in mining tenement 'M 8000286'.

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F Female access	[Unreliable]	The spatial information recorded in the site file is deemed to be unreliable due to errors of spatial data capture and/or quality of spatial information reported.
Status	C Closed	
	O Open	
	V Vulnerable	

L - Lodged		IA - Information Assessed		ACMC Decision Made
Information lodged, awaiting assessment		Information Awaiting ACMC Decision Assessment Only		R - Registered Site I - Insufficient information S - Stored Data

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Spatial Accuracy

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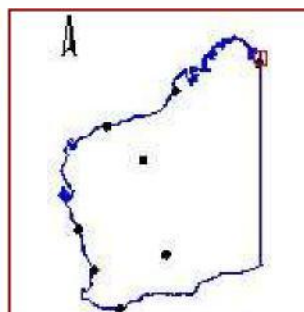
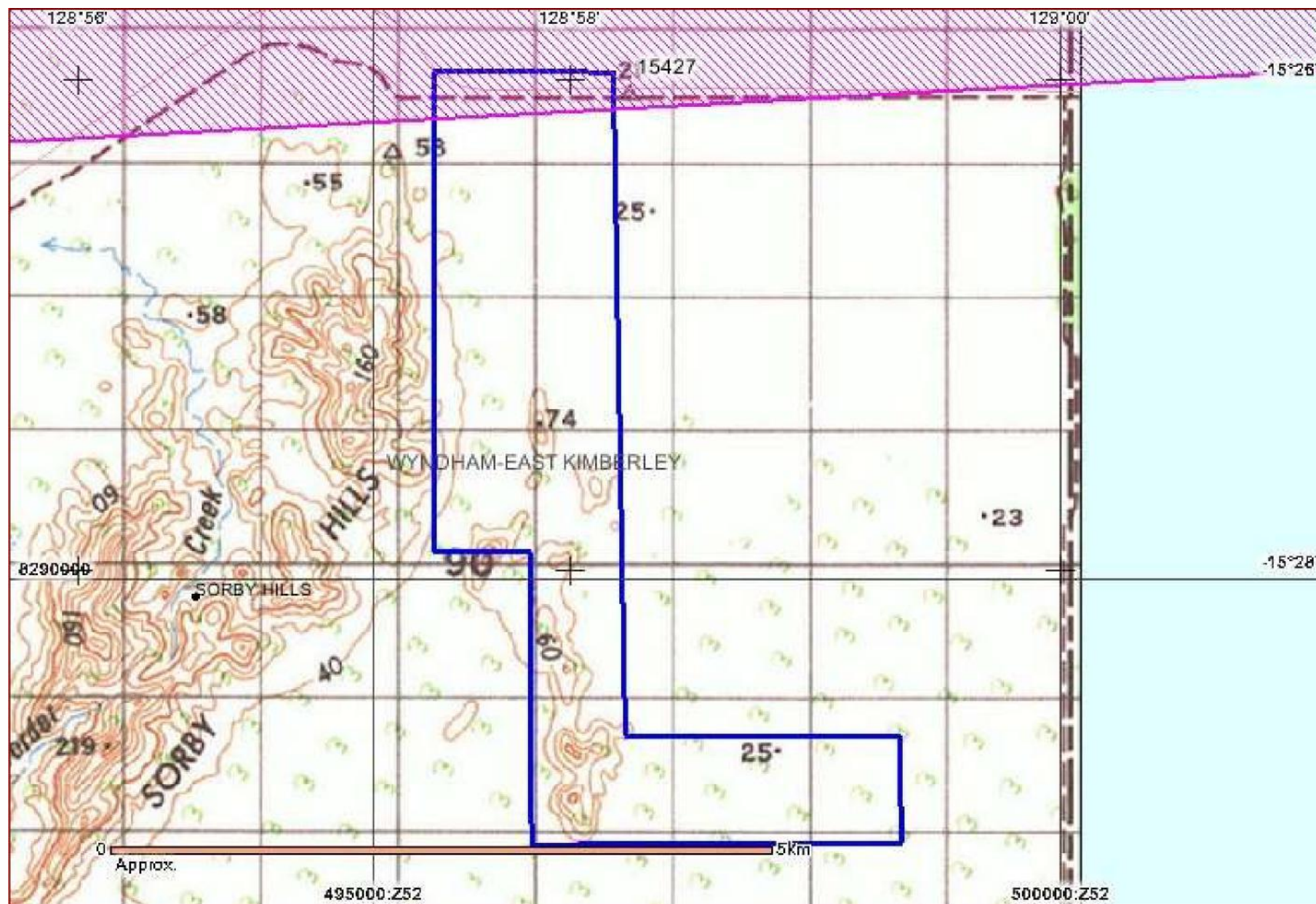
Sites Shown on Maps

Site boundaries may not appear on maps at low zoom levels



List of 1 Registered Aboriginal Sites with Map

Site ID	Status	Access	Restriction	Site Name	Site Type	Additional Info	Informants	Coordinates	Site No.
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Legend

Selected Heritage Sites

Registered Sites

Town

Map Area

Search Area

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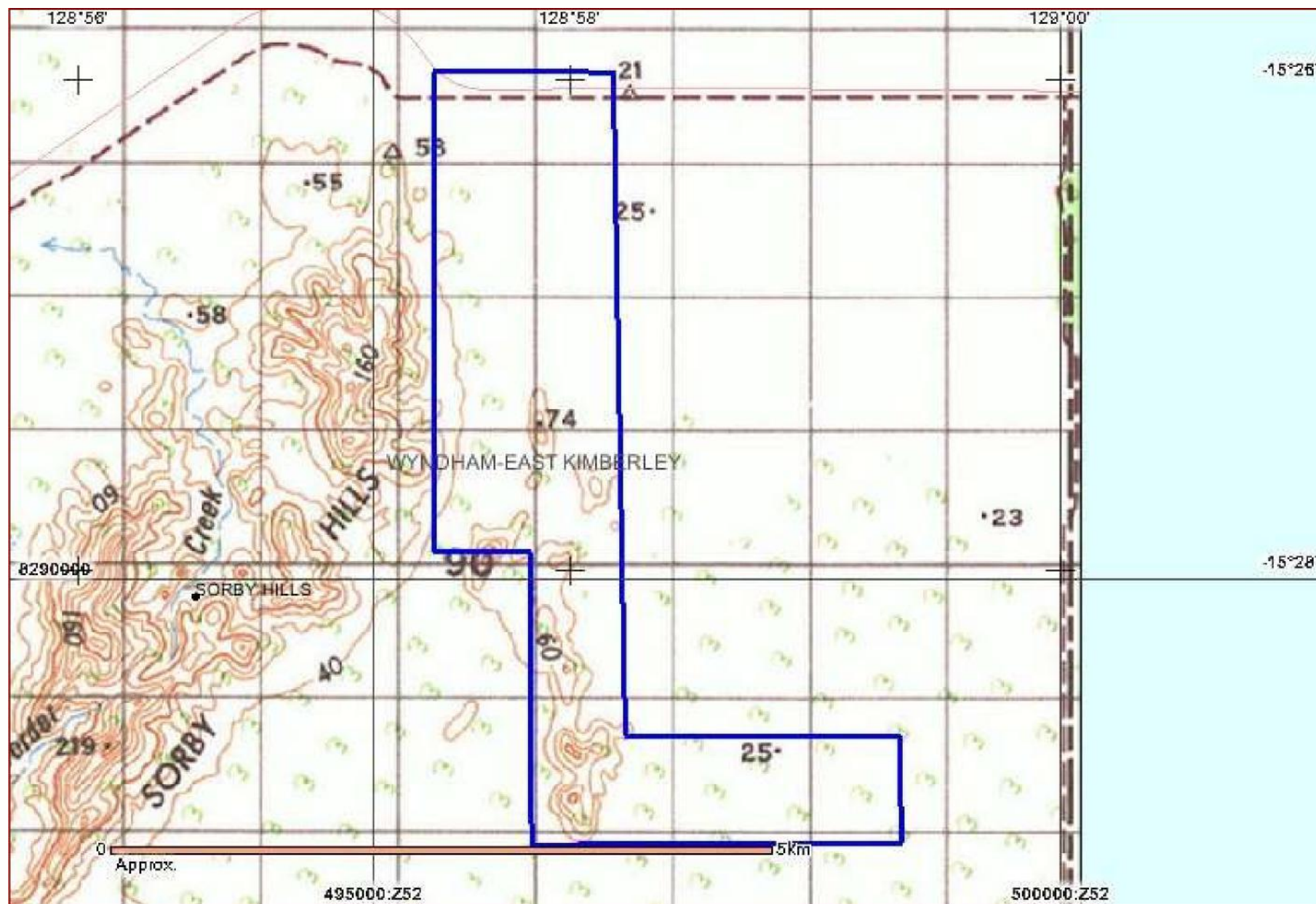
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List of Other Heritage Places with Map

No results



Legend

Selected Heritage Sites

Other Heritage Places

Town

Map Area

Search Area

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Photo 4. The core storage sheds.



Photo 5. The old mine site.



Photo 6. The location of the new tailings dumps.



Photo 7. The vegetation on the black soil plains in the vicinity of the new mine site.



Photo 8. The limestone hill located in the vicinity of WP 32.