



Application for Works Approval

Part V Division 3 of the *Environmental Protection Act 1986*

Works Approval Number W6949/2024/1

Applicant Dampier (Plutonic) Pty Ltd

ACN 131 670 963

File number DER2024/000283

Premises Marymia Gold Project – K2 Project
Mining Tenements M52/183 and M52/233
MEEKATHARRA WA 6642

As defined by the premises maps attached to the issued works approval

Date of report 19 November 2024 (FINAL)

Proposed Decision Works approval granted

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1. Decision summary

This decision report documents the assessment of potential risks to the environment and public health from emissions and discharges during the construction and operation of the premises. As a result of this assessment, works approval W6949/2024/1 has been granted.

2. Scope of assessment

2.1 Regulatory framework

In completing the assessment documented in this decision report, the Department of Water and Environmental Regulation (the department; DWER) has considered and given due regard to its regulatory framework and relevant policy documents which are available at <https://dwer.wa.gov.au/regulatory-documents>.

2.2 Application summary and overview of premises

On 13 June 2024, the applicant submitted an application for a works approval to the department under section 54 of the *Environmental Protection Act 1986* (EP Act).

The application is to undertake construction works relating to Category 6 at the premises to dewater the K2 Pit and underground to allow mining of ore. Discharge of approximately 500,000 kL/year of dewater will occur to the K1 Pit.

The premises is approximately 200 km northeast of Meekatharra and 185 km south of Newman in the Peak Hills Goldfields area of the Gascoyne Basin. It should be noted that ore will be processed offsite at the Plutonic Gold Project (Licence L9414/2023/1) so no additional activities or infrastructure is proposed. Refer to Figure 1 for a map of the prescribed premises boundary.

It should also be noted that the Marymia Gold Project – Trident Project is a separate project approximately 10 km away.

The premises relates to the category and assessed production / design capacity under Schedule 1 of the *Environmental Protection Regulations 1987* (EP Regulations) which are defined in works approval W6949/2024/1. The infrastructure and equipment relating to the premises category and any associated activities which the department has considered in line with *Guideline: Risk Assessments* (DWER 2020) are outlined in works approval W6949/2024/1. Refer to Figure 2 for a map of the infrastructure locations.

2.2.1 Category 6

There is currently 317,729 kL of water in the K2 Pit and underground. Water will be transferred to the K1 Pit via a single high density polyethylene (HDPE) pipeline. Initially, pumping will occur at a rate of 30 litres per second and once the workings are emptied after approximately four months, ongoing dewatering rates will be approximately 10 – 20 litres per second.

K2 Water Quality and K1 Baseline Ambient Groundwater Results

Water samples of K1 Pit and K2 Decline were collected and analysed in April 2014. K2 groundwater is generally brackish, slightly alkaline and bicarbonate rich with a similar quality to the groundwater around the K1 Pit, although slightly less saline. Results are within the ANZECC trigger values for Livestock Water Quality assessment criteria. Refer to Table 1.

Table 1: Water Quality Analysis Results

Parameter	Units	Sample Locations		ANZECC Livestock Trigger Values
		K1 Pit	K2 Decline	
pH	pH units	9.1	7.9	-
Electrical Conductivity	µS/cm	1,700	1,700	-
Total Suspended Solids	mg/L	16	5	-
Total Dissolved Solids	mg/L	1,200	1,000	4,000
Acidity as CaCO ₂	mg/L	-	5	-
Nitrate as N	mg/L	0.027	12	400
Nitrite as N	mg/L	0.008	<0.005	30
Total Phosphorus (Total P)	mg/L	<0.05	<0.05	-
Phosphate	mg/L	<0.005	0.007	-
Calcium	mg/L	110	87	1,000
Potassium	mg/L	19	18	-
Magnesium	mg/L	51	69	-
Sodium	mg/L	150	110	-
Bicarbonate	mg/L	37	190	-
Total Alkalinity	mg/L	63	190	-
Chloride	mg/L	200	0.26	-
Sulphate	mg/L	460	190	1,000
Hardness as CaCO ₃	mg/L	480	500	-
Aluminum	mg/L	<0.01	<0.01	-
Arsenic	mg/L	0.005	0.004	0.5
Barium	mg/L	-	0.028	-
Boron	mg/L	0.29	0.66	-
Beryllium	mg/L	<0.0005	<0.0005	ND
Cadmium	mg/L	<0.0001	0.0001	0.01
Chromium	mg/L	<0.001	<0.001	-

Parameter	Units	Sample Locations		ANZECC Livestock Trigger Values
		K1 Pit	K2 Decline	
Cobalt	mg/L	0.031	0.19	-
Copper	mg/L	0.003	<0.001	-
Iron	mg/L	<0.01	<0.01	-
Mercury	mg/L	<0.00005	<0.00005	0.002
Manganese	mg/L	0.066	<0.005	-
Molybdenum	mg/L	0.009	0.001	0.15
Nickel	mg/L	0.004	<0.001	-
Lead	mg/L	<0.001	<0.001	0.1
Selenium	mg/L	0.002	0.005	0.02
Strontium	mg/L	0.9	0.58	-
Titanium	mg/L	<0.001	<0.001	-
Vanadium	mg/L	0.01	0.006	ND
Zinc	mg/L	<0.001	0.084	20

Updated data was collected in July 2024 of the ambient groundwater monitoring around K1 Pit and K2 Pit. Refer to Table 2.

Table 2: K1 Pit and K2 Pit Ambient Groundwater Quality.

Bore	pH	Electrical Conductivity (µS/cm)	Total Dissolved Solids (mg/L)
K1-3	7.41	4,537	2,949
K1-9	8.11	1,073	696
K1-14	7.09	2,282	1,483
K2 Pit	7.00	1,798	1,169

Refer to Figure 3 for a map of the ambient groundwater monitoring network.

The Applicant has committed to quarterly monitoring of the ambient groundwater monitoring network, with monitoring commencing prior to commissioning.

K1 Pit previously stored tailings

It should be noted that during June 1997 and January 1998, approximately 268,406 tonnes of tailings were deposited into the K1 Pit. It was not used primarily as a Tailings Storage Facility (TSF), however, received low volumes of tailings intermittently as the historical TSF reached capacity.

In April 2014, tailings samples were collected from four locations within the K1 Pit to a depth of 50 cm. Samples were submitted to MPL Laboratories and analysed using the Australian Standard Leaching Procedure (ASLP) to determine soluble metal concentrations in tailings leachate. Refer to Table 3.

The Applicant has stated that these results indicate that tailings leachate is expected to be moderately alkaline and saline with very low concentrations of metals and metalloids, including mercury, and very low concentrations of residual cyanide. Tailings dilution with water transferred from the K2 Pit will be significantly greater than the dilution factor used in the ASLP tests. The results are therefore considered to exhibit a conservative representation of expected water quality in the K1 Pit. The Applicant has stated that water stored in the K1 pit is considered unlikely to cause environmental harm or significantly reduce groundwater quality in proximity to the pit. The Applicant has committed to baseline ambient groundwater monitoring with ongoing quarterly monitoring to allow comparisons of data.

Table 3: K1 Pit Tailings Analysis

Parameter	Units	Sample ID			
		A	B	C	D
pH 1:5 soil:water	pH units	8.1	8	8.2	8.4
EC	µS/cm	3000	2600	2000	1400
Soluble Bicarbonate	mg/kg	340	120	150	130
Soluble Carbonate	mg/kg	<25	<25	<25	<25
Soluble Hydroxide	mg/kg	<25	<25	<25	<25
Soluble Alkalinity	mg/kg	340	120	150	130
Chloride	mg/kg	3000	1500	1700	1400
Sulphate	mg/kg	3200	4200	1800	890
WAD Cyanide	mg/kg	<0.5	1.1	<0.5	<0.5
pH of final leachate	pH units	8.2	8.4	8.7	8.8
Aluminium	mg/L	<0.1	<0.1	0.2	0.7
Arsenic	mg/L	<0.05	<0.05	<0.05	<0.05
Cadmium	mg/L	<0.01	<0.01	<0.01	<0.01
Calcium	mg/L	72	130	30	16
Chromium	mg/L	<0.01	<0.01	<0.01	<0.01
Copper	mg/L	<0.01	<0.01	<0.01	<0.01
Iron	mg/L	0.03	0.1	0.23	0.51
Lead	mg/L	<0.03	<0.03	<0.03	<0.03
Magnesium	mg/L	34	32	8.5	4.4
Manganese	mg/L	0.08	<0.01	<0.01	<0.01
Mercury	mg/L	<0.00005	<0.00005	<0.00005	<0.00005
Molybdenum	mg/L	<0.03	<0.03	<0.03	<0.03
Nickel	mg/L	<0.02	<0.02	<0.02	<0.02
Potassium	mg/L	10	9	8.2	6.1
Selenium	mg/L	<0.12	<0.12	<0.12	<0.12
Sodium	mg/L	66	74	67	45
Uranium	mg/L	0.004	0.001	<0.0005	0.001
Zinc	mg/L	<0.02	<0.02	<0.02	<0.02

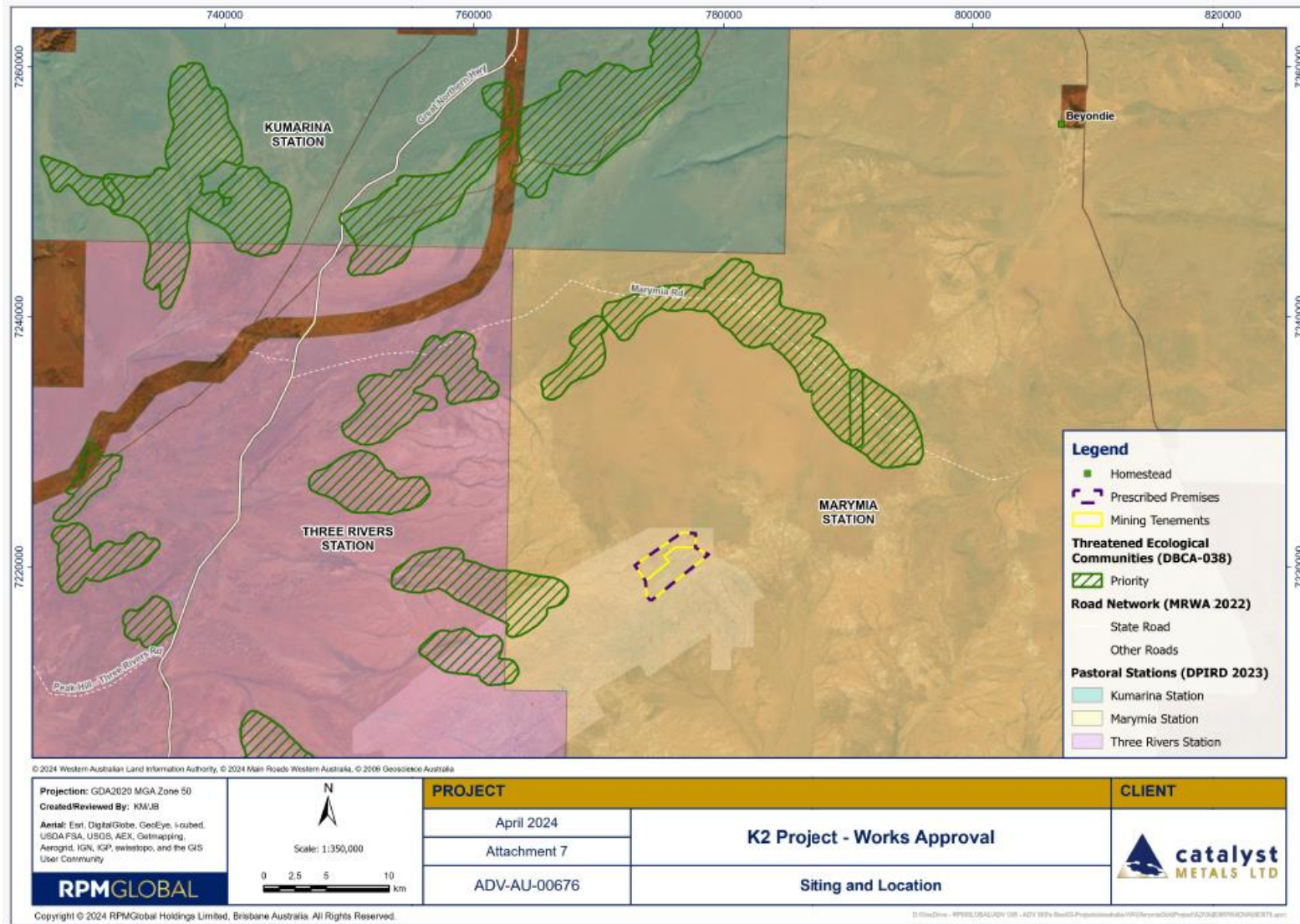


Figure 1: Map of the boundary of the prescribed premises

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IR-T13 Decision report template (short) v3.0 (May 2021)

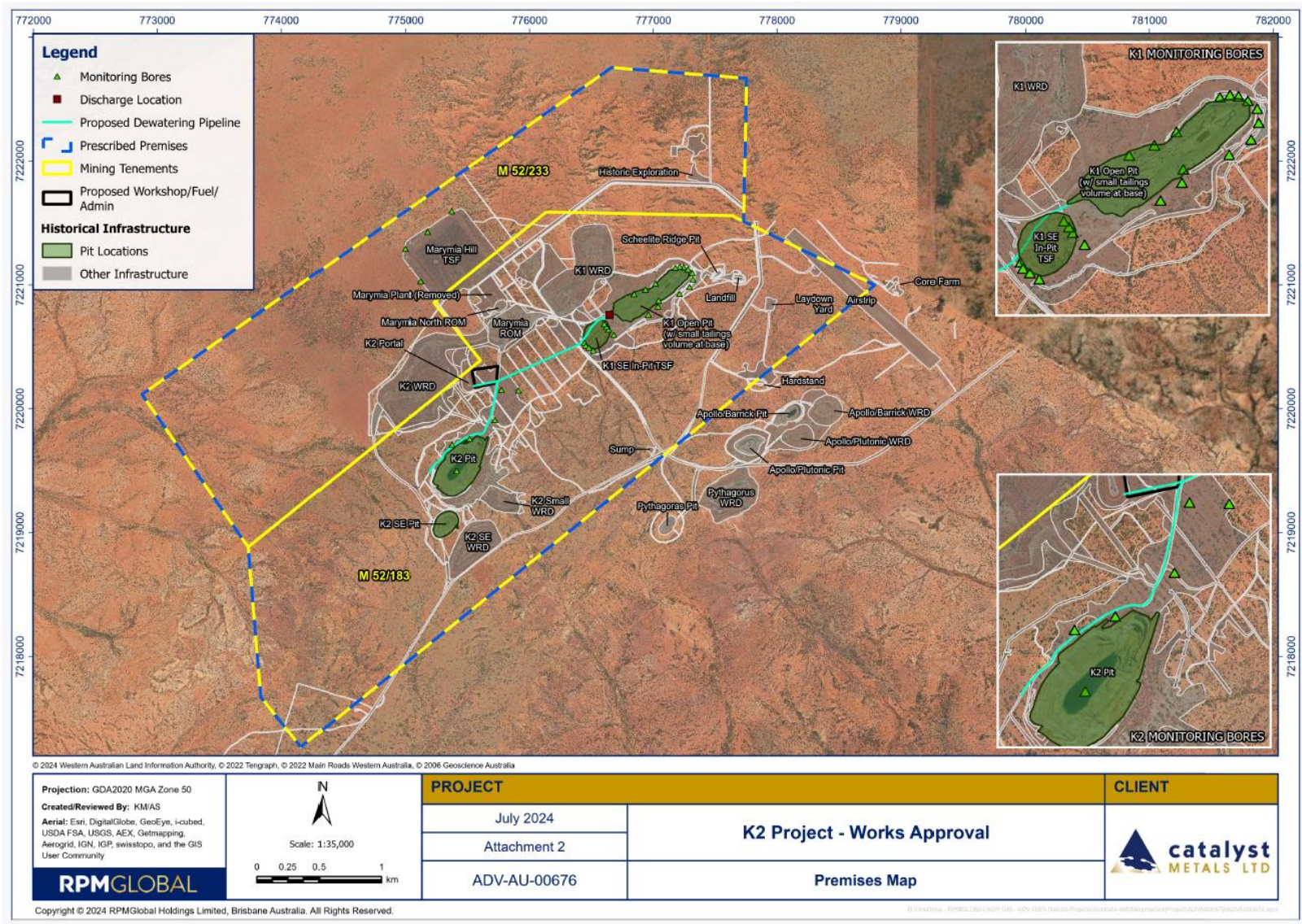


Figure 2: Infrastructure Locations

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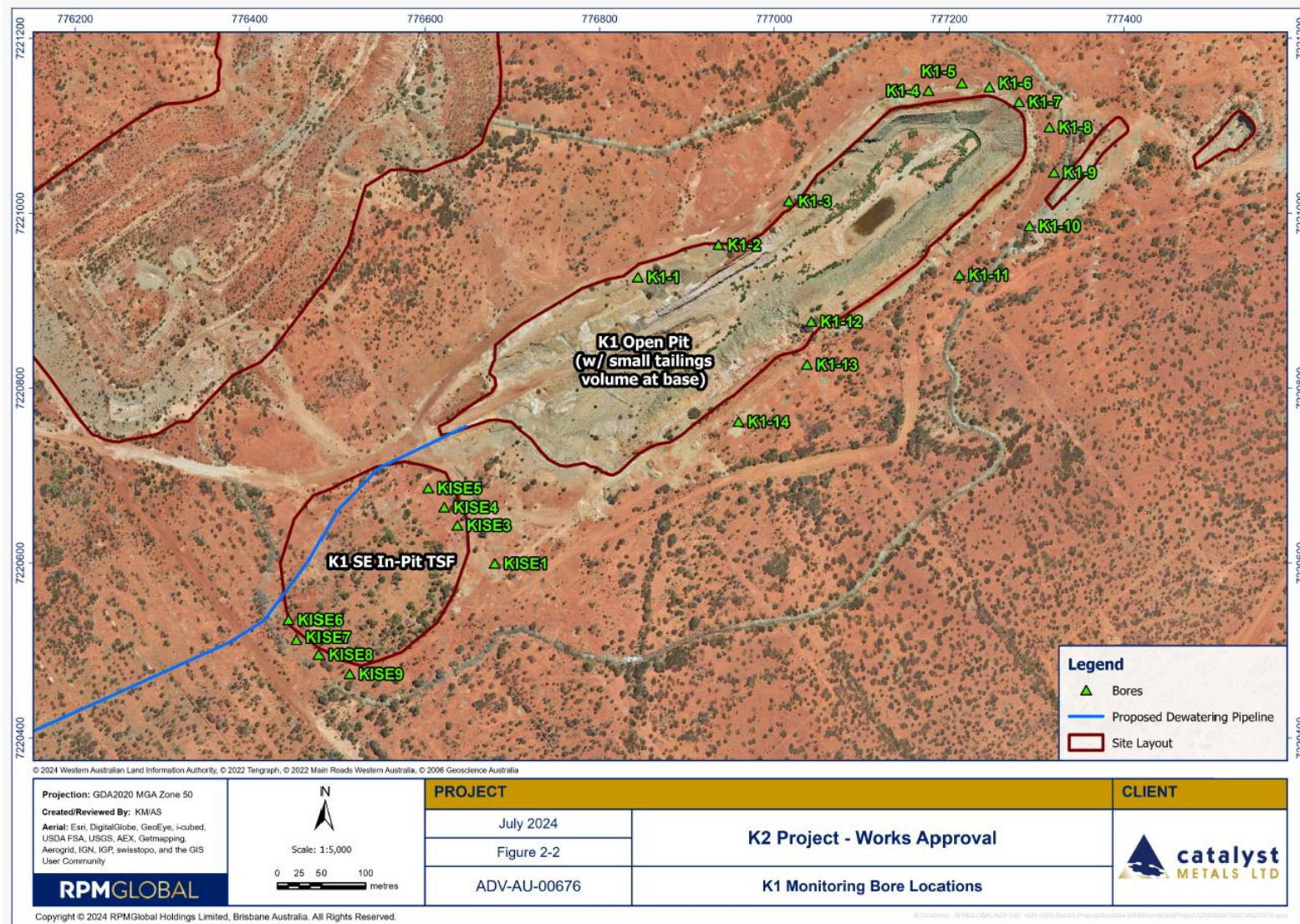


Figure 3: K1 Groundwater Monitoring Bore Locations (Note K2 Pit Monitoring Bore is shown in Figure 2)

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3. Risk assessment

The department assesses the risks of emissions from prescribed premises and identifies the potential source, pathway and impact to receptors in accordance with the *Guideline: Risk Assessments* (DWER 2020).

To establish a risk event there must be an emission, a receptor which may be exposed to that emission through an identified actual or likely pathway, and a potential adverse effect to the receptor from exposure to that emission.

3.1 Source-pathways and receptors

3.1.1 Emissions and controls

The key emissions and associated actual or likely pathway during premises construction and operation which have been considered in this decision report are detailed in Table 4 below. Table 4 also details the control measures the applicant has proposed to assist in controlling these emissions, where necessary.

Table 4: Proposed applicant controls

Emission	Sources	Potential pathways	Proposed controls
Construction			
Dust	Construction of the dewatering pipeline	Air / windborne pathway	<ul style="list-style-type: none"> All vehicles and machinery will be regularly maintained in accordance with manufacturers' specifications to ensure effective operation and not producing excessive noise or emissions; A water truck will be available on site for dust suppression; and Speed limits will be enforced, which will reduce dust generation.
Commissioning			
Dewatering water from K2 Pit and underground	Pipeline leak during wet commissioning of the transfer pipeline	Direct discharge	<ul style="list-style-type: none"> Pipeline to be constructed above ground to facilitate inspections; Leak detection system fitted. The pipeline will be fitted with telemetry and an automatic cut-out; Pipeline inside a v-notch drain to prevent the spread of any spills should a leak occur. The pipeline corridor between the K1 Pit and K2 Pit to be earthen bunded pipeline corridor out of welded HDPE pipes to minimise flows into undisturbed areas and to prevent vehicle collision with pipeline; and Pipeline corridor between the K1 Pit and K2 Pit to be inspected at least once per day if pumping is occurring and once per

Emission	Sources	Potential pathways	Proposed controls
			shift once mining operations commence.
Operation (including time-limited-operations operations)			
Dewatering water from K2 Pit and underground	Rupture from the dewatering pipeline	Direct discharge	<ul style="list-style-type: none"> Pipeline to be constructed above ground to facilitate inspections; Leak detection system fitted. The pipeline will be fitted with telemetry and an automatic cut-out; Pipeline inside a v-notch drain to prevent the spread of any spills should a leak occur. The pipeline corridor between the K1 Pit and K2 Pit to be earthen bunded pipeline corridor out of welded HDPE pipes to minimise flows into undisturbed areas and to prevent vehicle collision with pipeline; and Pipeline corridor between the K1 Pit and K2 Pit to be inspected at least once per day if pumping is occurring and once per shift once mining operations commence.
	Overtopping of K1 Pit	Direct discharge	<ul style="list-style-type: none"> 5 m freeboard; Water balance indicates there is sufficient capacity in the K1 pit; and Discharge point and freeboard to be inspected once per week if pumping is occurring.
	K1 Pit mine dewatering discharge infiltrating the groundwater	Direct discharge	<ul style="list-style-type: none"> Water quality of discharge is similar to receiving environment; Monitor discharge quality in the K1 Pit quarterly; Use existing monitoring bores situated around the K1 Pit to monitor quality; and Pit lake management in accordance with Mine Closure Plan regulated by the Department of Energy, Mines, Industry Regulation and Safety (DEMIRS).
Historic tailings mixing with mine dewatering water	K1 Pit mine dewatering discharge infiltrating the groundwater	Direct discharge	<ul style="list-style-type: none"> Tailings samples in K1 Pit analysed using the Australian Standard Leaching Procedure (ASLP) to determine soluble metal concentrations in tailings leachate; Tailings leachate is expected to be moderately alkaline and saline with very low concentrations of metals and metalloids, including mercury, and very low concentrations of residual cyanide.

Emission	Sources	Potential pathways	Proposed controls
			<p>Tailings dilution with water transferred from the K2 Pit will be significantly greater than the dilution factor used in the ASLP tests;</p> <ul style="list-style-type: none"> Results are considered to exhibit a conservative representation of expected water quality in the K1 Pit. Water stored in the K1 Pit is considered unlikely to cause environmental harm or significantly reduce groundwater quality in proximity to the pit; and Baseline ambient groundwater monitoring will be conducted in the vicinity of the K1 Pit and ongoing quarterly monitoring for comparison and assessment of water quality impacts.

3.1.2 Receptors

In accordance with the *Guideline: Risk Assessment* (DWER 2020), the Delegated Officer has excluded the applicant’s employees, visitors, and contractors from its assessment. Protection of these parties often involves different exposure risks and prevention strategies, and is provided for under other state legislation.

Table 5. Figure 4 and Figure 5 and below provides a summary of potential human and environmental receptors that may be impacted as a result of activities upon or emission and discharges from the prescribed premises (*Guideline: Environmental Siting* (DWER 2020)).

Table 5: Sensitive human and environmental receptors and distance from prescribed activity

Human receptors	Distance from prescribed activity
Marymia Homestead	45 km northeast
Three Rivers Station	56 km west
Newman	185 km north
Meekatharra	200 km southwest
<p>The Project is located within the Gingirana Native Title Determination (WCD2017/011) and is managed by the Marputu Aboriginal Corporation and is registered with the National Native Title Tribunal. According to NOI 4931, the following surveys have been completed over the Project area:</p> <ul style="list-style-type: none"> Archaeological survey undertaken by Quartermaine Consultants in 1991, 1996 and 2003; AND Ethnographic survey completed out by Rory O’Connor in July 2003. 	<p>Impacts to either of these sites are not anticipated from the proposed mine dewatering activities. The closest distance between dewatering activities and the nearest site (Marymia 1) is over 800 m.</p> <p>Additionally, the topography between dewatering activities and these heritage sites is a watershed, where K2 localised topography is drained west to the Gascoyne River and the lower K2 region is drained to the south.</p>

<p>There are two registered sites partly inside the prescribed premises:</p> <ul style="list-style-type: none"> • Marymia 1 - an artifact scatter site; and • Mythological Showplace - a mythological showplace. 	
<p>Environmental receptors</p>	<p>Distance from prescribed activity</p>
<p>Environmentally Sensitive Areas</p>	<p>N/A</p>
<p>Threatened Ecological Communities</p>	<p>N/A</p>
<p>Threatened and/or priority fauna</p>	<p>Bamford Consulting Ecologists (Bamford) (2019) was commissioned to conduct a basic fauna assessment on four areas of the Marymia Gold Project, including K2 Project. Field assessments were undertaken between 6-10 November 2018 and 6-9 August 2019 (Bamford, 2019).</p> <p>Of the 248 species of vertebrate fauna that are expected to occur in the survey area, 20 are considered to be of conservation significance. The majority of conservation-significant species are expected as irregular visitors or vagrants; one bird is considered to be a Visitor, and one bird and three mammals are considered to be Residents (Bamford, 2019).</p> <p>The field survey did not find any <i>Leiopoa ocellata</i> (Malleefowl) mounds, suggesting that it is not a breeding resident at Marymia; however, individual birds may visit (Bamford, 2019). <i>Dasyercus blythi</i> (Brush-tailed Mulgara) has been the subject of long-term monitoring at Marymia due to early surveys recording the species incorrectly as <i>Dasyercus cristicauda</i> (Crest-tailed Mulgara), which was a Threatened species at the time. All burrows were found to be inactive, which is typical of the species which can vary in abundance from year to year (Bamford, 2019).</p>
<p>Threatened and/or priority flora</p>	<p>Onshore Environmental Consultants (Onshore) (2019) were commissioned to conduct a detailed two-season flora and vegetation survey covering nine areas of Marymia tenements, including K2. Field surveys were conducted between 16-20 November 2018; and 5-10 May 2019.</p> <p>A total of 13 associations were recorded within the Project Area. None of these associations corresponded to Threatened Ecological Communities listed under the Federal <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act), <i>Western Australian Biodiversity Conservation Act 2016</i> (BC Act), or Priority ecological communities.</p> <p>A total of 209 plant taxa (including varieties and subspecies) from 35 families and 89 genera were recorded from the field survey areas within the</p>

	<p>Marymia Gold Project area. The following conclusions were drawn based on the survey results (Onshore, 2019):</p> <ul style="list-style-type: none"> • No plants gazetted as Threatened Flora pursuant to the BC Act were recorded in the Project area. • No plants listed under the EPBC Act were recorded. • Two Priority species were recorded in the Project area and consist of: <ul style="list-style-type: none"> ➢ <i>Sauropus sp. Woolgorong</i> (Priority 3). ➢ <i>Thryptomene sp. Leinster</i> (Priority 3). • One species with a significant range extension was recorded within the Project Area: <ul style="list-style-type: none"> ➢ <i>Hibiscus brachychlaenus</i>. ➢ No weed species listed as Declared under the Biosecurity and Agricultural Management Act 2007 were recorded. • No plant species listed as a Weed of National Significance (WoNS) under the Australian Weeds <p>Strategy were encountered in the Project area. Vegetation conditions within the Project area ranged from Good to Very Good, with portions previously disturbed through historical mining and exploration activities. The vegetation of the greater Marymia Gold Project area showed obvious signs of degradation by cattle grazing, and camels were also present. Weed species were a minor disturbance within the Project area, with only two species recorded at low densities in the greater Marymia area.</p>
Public drinking water source areas	N/A
Rivers, lakes, oceans, and other bodies of surface water, etc.	N/A
Acid sulfate soils	N/A
Other	N/A

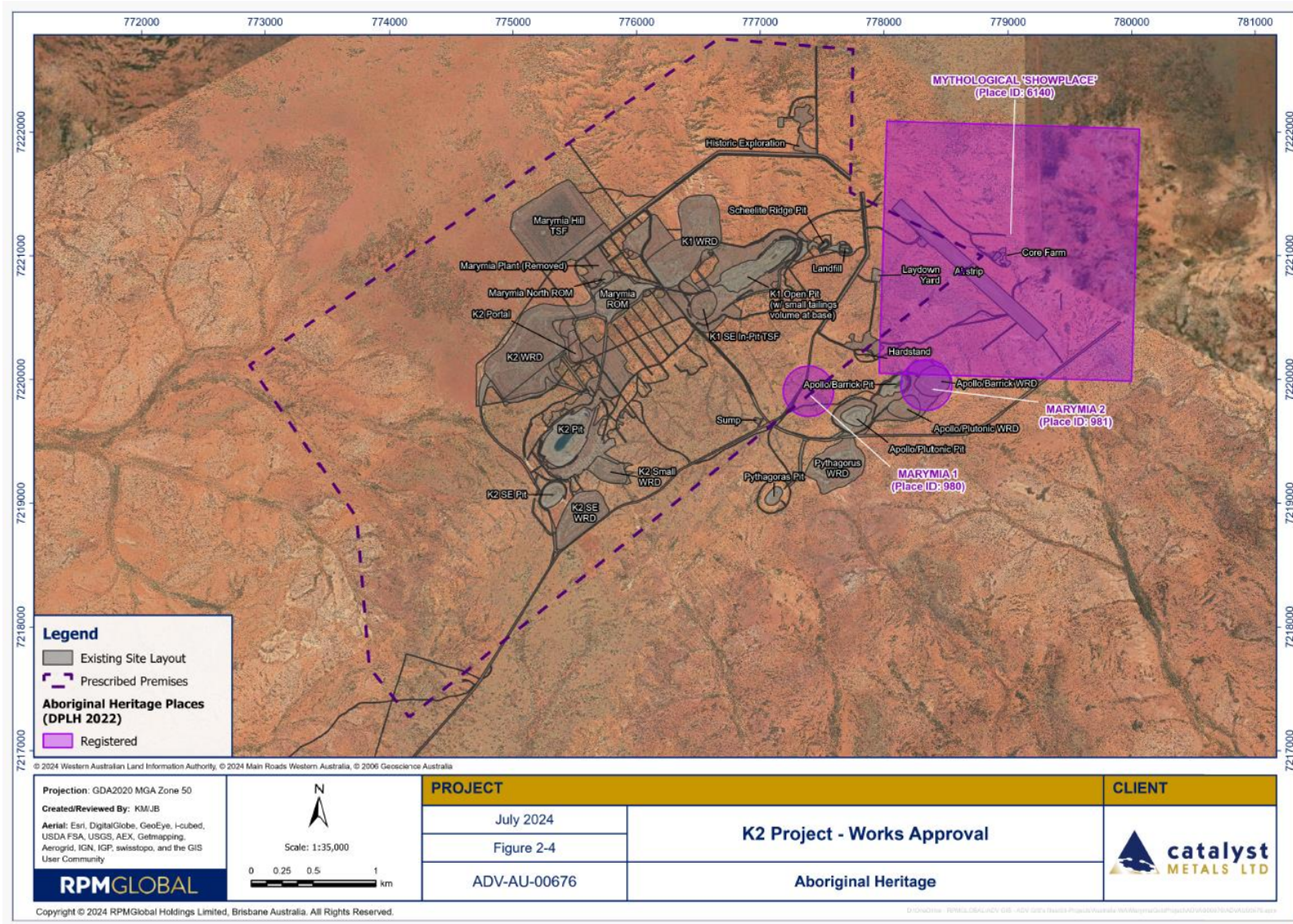


Figure 4: Aboriginal Heritage

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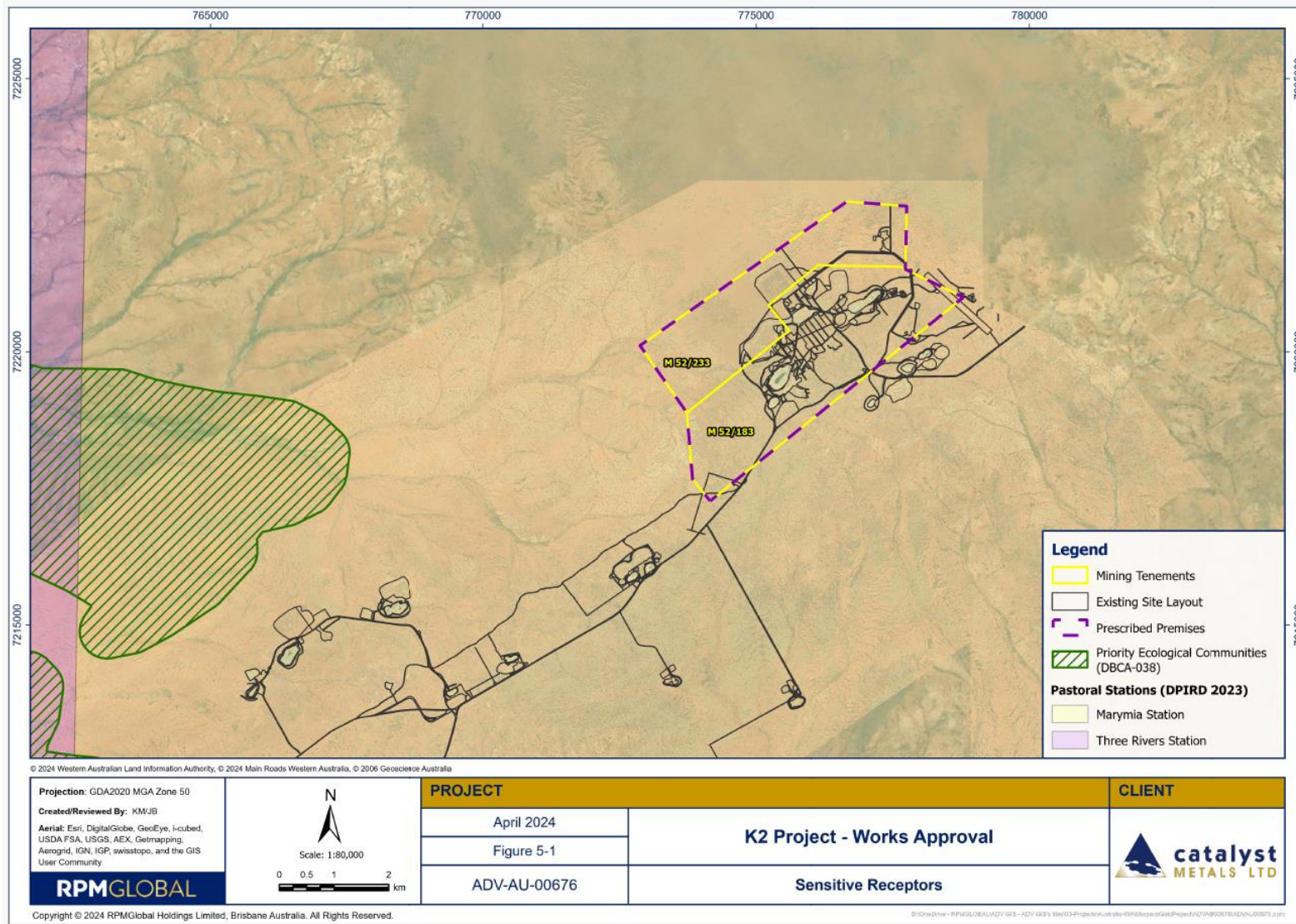


Figure 5: Distance to sensitive receptors

3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) for each identified emission source and takes into account potential source-pathway and receptor linkages as identified in Section 3.1. Where linkages are in-complete they have not been considered further in the risk assessment.

Where the applicant has proposed mitigation measures/controls (as detailed in Section 3.1), these have been considered when determining the final risk rating. Where the delegated officer considers the applicant's proposed controls to be critical to maintaining an acceptable level of risk, these will be incorporated into the works approval as regulatory controls.

Additional regulatory controls may be imposed where the applicant's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 6.

Works approval W6949/2024/1 that accompanies this decision report authorises construction and time-limited operations. The conditions in the issued works approval, as outlined in Table 6 have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

A licence is required following the time-limited operational phase authorised under the works approval to authorise emissions associated with the ongoing operation of the premises i.e. Category 6 activities. A risk assessment for the operational phase has been included in this decision report, however licence conditions will not be finalised until the department assesses the licence application.

Table 6: Risk assessment of potential emissions and discharges from the premises during construction, commissioning and operation

Risk events					Risk rating ¹ C = consequence L = likelihood	Applicant controls sufficient?	Conditions ² of works approval	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
Construction								
Construction of the dewatering pipeline	Dust	Air/windborne pathway causing impacts to health and amenity	Priority flora	Refer to Section 3.1	C = Slight L = Unlikely Low Risk	Y	Condition 2 – general dust management requirements	N/A
Commissioning								
Pipeline leak during wet commissioning of the transfer pipeline	Dewatering water from K2 Pit and underground	Overland runoff reducing surface water quality for livestock Disturbance to registered Aboriginal Heritage sites	Aboriginal Heritage Marymia Station Livestock TEC Priority Flora Native Vegetation Surface water	Refer to Section 3.1	C = Moderate L = Unlikely Medium Risk	Y	Condition 1, Table 1 Design and construction / installation requirements, requires HDPE pipeline, telemetry, automatic cut-out and earthen bunded pipeline corridor. Condition 7, Table 3 Emissions and discharges limits during environmental commission, requires a limit for the volume of mine dewatering water transferred along the pipeline from K2 Pit to K1 Pit Condition 6, Table 2 Environmental commissioning requirements, requires maintenance of pipeline controls and inspections Condition 8, Table 9 Emissions and discharges monitoring, requires dewater	N/A

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Risk events					Risk rating ¹ C = consequence L = likelihood	Applicant controls sufficient?	Conditions ² of works approval	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
							quality monitoring	
Operation (including time-limited-operations operations)								
Rupture from the dewatering pipeline	Dewatering water from K2 Pit and underground	Overland runoff reducing surface water quality for livestock. Disturbance to registered Aboriginal Heritage sites	Aboriginal Heritage Marymia Station Livestock TEC Priority Flora Native Vegetation Surface water	Refer to Section 3.1	C = Moderate L = Unlikely Medium Risk	Y	Condition 1, Table 1 Design and construction / installation requirements, requires HDPE pipeline, telemetry, automatic cut-out and earthen banded pipeline corridor Condition 14, Table 4 Infrastructure and equipment requirements during time limited operations, requires maintenance of pipeline controls and inspections Condition 16, Table 6 Emissions and discharges limits during time limited operations, requires a limit for the volume of mine dewatering water transferred along the pipeline from K2 Pit to K1 Pit Condition 19, Table 9 Emissions and discharges monitoring, requires dewater quality monitoring	N/A
Overtopping of K1 Pit	Dewatering water from K2 Pit and underground	Overland runoff reducing surface water quality for livestock.	Aboriginal Heritage Marymia Station	Refer to Section 3.1	C = Moderate L = Unlikely Medium Risk		Condition 1, Table 1 Design and construction / installation requirements, requires the K1 Pit to have a	N/A

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Risk events					Risk rating ¹ C = consequence L = likelihood	Applicant controls sufficient?	Conditions ² of works approval	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
		Disturbance to registered Aboriginal Heritage sites	Livestock TEC Priority Flora Native Vegetation Surface water				5 m freeboard Condition 19, Table 9 Emissions and discharges monitoring, requires dewater quality monitoring	
K1 Pit mine dewatering discharge infiltrating the groundwater	Dewatering water from K2 Pit and underground	Groundwater mounding reducing water quality at the root zone of vegetation and surface water quality	Groundwater	Refer to Section 3.1	C = Moderate L = Possible Medium Risk	Y	Condition 19, Table 9 Emissions and discharges monitoring, requires monitoring of dewater quality Condition 20, Table 10 Monitoring of groundwater, requires monitoring of SWL, water quality Condition 21, Table 7 Infrastructure requirements – groundwater monitoring wells, requires that additional groundwater monitoring be installed if others found to be inoperable	N/A
	Historic tailings mixing with mine dewatering water	Seepage / infiltration of leachates impacting water quality at the root zone of vegetation and surface water quality	Groundwater	Refer to Section 3.1	C = Moderate L = Possible Medium Risk	N	Condition 20, Table 10 Monitoring of groundwater, requires monitoring of SWL, water quality, <u>including Total CN and WAD-CN</u> Condition 21, Table 7 Infrastructure requirements – groundwater monitoring wells, requires that additional groundwater monitoring be installed if others found to be	<u>Addition of Total CN and WAD-CN to monitoring schedule due to previous gold processing and tailings deposition onsite to regulate potential for elevations, particularly where dewater is added to K1 Pit that has</u>

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Risk events					Risk rating ¹ C = consequence L = likelihood	Applicant controls sufficient?	Conditions ² of works approval	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
							inoperable	<u>previously had tailings deposition</u>

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guideline: Risk Assessments* (DWER 2020).

Note 2: Proposed applicant controls are depicted by standard text. **Bold and underline text** depicts additional regulatory controls imposed by department.

4. Consultation

Table 7 provides a summary of the consultation undertaken by the department.

Table 7: Consultation

Consultation method	Comments received	Department response
Application advertised on the department's website on 26 August 2024	None received	N/A
Local Government Authority advised of proposal on 20 August 2024	None received	N/A
Department of Energy, Mines, Industry Regulation and Safety (DEMIRS) advised of proposal 20 August 2024	DMIRS replied on 06 September 2024 confirming that dewatering of the K2 Pit and underground via pipeline to the K1 Pit has been approved under Reg IDS 47870 and 64082.	Noted.
Department of Planning, Lands and Heritage (DPLH) advised of proposal on 20 August 2024	<p>DPLH replied on 11 September 2024 advising that:</p> <p><i>"A review of the Register of Places and Objects, as well as the DPLH Aboriginal Heritage Database, concludes that the subject area described as Mining Tenements M 52/183 and M 52/233, intersects with the actual boundary of Aboriginal Sites MYTHOLOGICAL 'SHOWPLACE' (ID 6140) and MARYMIA 1 (ID 980). Please note these sites intersect within the boundaries of M 52/183 only.</i></p> <p><i>Therefore, if any ground disturbing works related to the proposal occurs within the boundaries of the above sites, approval under the Aboriginal Heritage Act 1972 (AHA) will be required.</i></p> <p><i>The subject area described as Mining Tenements M 52/183 and M 52/233 in its entirety does not appear to have been comprehensively surveyed, so it is unknown what other Aboriginal Cultural Heritage may be in the area. Dampier (Plutonic) Pty Ltd will need to be aware of its obligations under the AHA."</i></p>	Noted.
Marputu Aboriginal Corporation advised of	Marputu Aboriginal Corporation replied on 04 October 2024.	Marputu Aboriginal Corporation replied on 04 October 2024.

proposal on 20 August 2024	Refer to Appendix 1.	Refer to Appendix 1.
Applicant was provided with draft documents on 30 October 2024	The Applicant replied on 06 November 2024 and 14 November 2024 Refer to Appendix 1	The Applicant replied on 06 November 2024 and 14 November 2024 Refer to Appendix 1

5. Conclusion

Based on the assessment in this decision report, the delegated officer has determined that a works approval will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

References

1. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
2. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Environmental Siting*, Perth, Western Australia.
3. DWER 2020, *Guideline: Risk Assessments*, Perth, Western Australia.
4. Dampier (Plutonic) Pty Ltd, Works Approval Application - Dampier (Plutonic) Pty Ltd 13/06/2024, Perth, Western Australia (DWERDT9654431 – Application).
5. Dampier (Plutonic) Pty Ltd, RE: Works Approval Application - Dampier (Plutonic) Pty Ltd 25/06/2024, Perth, Western Australia (AA2290777 – prescribed premises).
6. Dampier (Plutonic) Pty Ltd, RE: Works Approval Application - Dampier (Plutonic) Pty Ltd 25/06/2024, Perth, Western Australia (AA2290774 – prescribed activities).
7. Dampier (Plutonic) Pty Ltd, Marymia K2 Works Approval - Response to Validation RFI 23/07/2024, Perth, Western Australia (A2297929 – reply to RFI).
8. Bamford Consulting Ecologists (Bamford). (2019). *Marymia Project - Fauna Assessment of Exploration Areas: November 2018*.
9. Onshore Environmental Consultants (Onshore). (2019). *Marymia Gold Project - Detailed Flora and Vegetation Survey*.
10. Dampier (Plutonic) Pty Ltd, RE: [EXTERNAL] W6949 Marymia Gold Project – K2 Project 09/10/2024, Perth, Western Australia (A2318065 – clearing and groundwater queries).
11. Dampier (Plutonic) Pty Ltd, RE: [EXTERNAL] FW: NOTIFICATION : APPLICATION FOR A WORKS APPROVAL W6949/2024/1 - DRAFT INSTRUMENT AND DECISION REPORT 06/11/2024, Perth, Western Australia (A2325633 – 21 days comments).
12. Dampier (Plutonic) Pty Ltd, RE: [EXTERNAL] FW: NOTIFICATION : APPLICATION FOR A WORKS APPROVAL W6949/2024/1 - DRAFT INSTRUMENT AND DECISION REPORT 14/11/2024, Perth, Western Australia (A2325872 – clarifying Total CN and WAD-CN and K2 Pit monitoring).

Appendix 1: Summary of Marputu Aboriginal Corporation's comments on Application Form and Supporting Documentation

Document	Summary of Marputu Aboriginal Corporation's comment	Department's response
Supporting document	Dampier's Supporting Document indicates that the latest water quality assessment on the K2 pit's surface water was completed in 2014. As this is now 10 years old, a more recent water quality analysis should have been used to understand the current water quality at K2.	DWER raised this issue and requested more updated groundwater quality monitoring as part of a Request for Further Information. Additional information was provided by the Applicant to address this.
Supporting document	Dampier's Supporting Document includes a desktop and site investigation completed for the application area. However, a fauna survey was not utilised to validate information or ensure a better understanding of fauna species present in the application area.	The Supporting Documentation has the information on the fauna field investigations included.
Supporting document	Dampier has not specified the length of the dewatering pipeline or the area that needs to be cleared for its establishment. It is unclear if a native vegetation clearing permit is required or if Dampier is relying on a clearing exemption.	<p>The pipeline runs between the K2 Pit and the K1 Pit and is approximately 2 km in length as shown in figures within the Supporting Documentation.</p> <p>Clearing will be undertaken under Regulation 20 of the <i>Environmental Protection (Clearing of Native Vegetation) Regulations 2004</i> which allows 10 ha of clearing per tenement per financial year where an approval under the Mining Act has been granted.</p> <p>The proposed pipeline corridor is within existing disturbed zones – either historical drill lines and or historical open pit related ground disturbances. The pipeline corridor honours the currently approved Mining Proposal REG ID 47870.</p>
Supporting document	Dampier has indicated that it will monitor groundwater level and quality once prior to construction and quarterly during operation. Monitoring groundwater level and quality once does not seem sufficient to provide adequate understanding on the baseline data for water quality. Further, Dampier has not indicated whether it will enact management measures in the event a groundwater issue is noted.	The Applicant commenced SWL and field sampling in K1 – commenced in June 2024. The SWL in this area is approx. 38-44m deep. Field sampling reveals 7-7.4 pH, TDS 650-2000. 10 of the 14 monitoring holes around K1 are being assessed for SWL and 4 are being assessed for Field Sampling.

Document	Summary of Marputu Aboriginal Corporation's comment	Department's response
Supporting document	<p>Dampier's Supporting Document indicates water trucks will be utilised to suppress dust in the application area. However, the source of this water hasn't been specified.</p> <p>The application suggests that water will be sourced from elsewhere as the dewatered water is only being transferred to the K1 pit.</p>	The Applicant has a Groundwater Licence under the <i>Rights in Water and Irrigation Act 1914</i> (RIWI Act).
Supporting document	Dampier has not clarified the drawdown depth which would indicate the potential impact of a reduction in groundwater for the priority flora species near the K2 pit and locally significant vegetation type. A monitoring plan has not been developed for either these species or vegetation type.	Part V of the EP Act regulates the discharge of the mine dewatering water as opposed to the abstraction of the mine dewatering water; abstraction is regulated under the RIWI Act (see above response also)
Supporting document	Dampier's Supporting Document did not include the material characterisation report on the K2 pit included in the Underground Mine Mining Proposal (52490). Further, a material characterisation assessment has not been completed on the K1 pit to clarify environmental risks from the pit wall.	<p>The geochemical information is provided in Section 2.2.1 and also ambient groundwater quality monitoring will track any seepage.</p> <p>Pit integrity is regulated by DEMIRS.</p>
Supporting document	Dampier has not clarified management measures to ensure vegetation clearing is restricted to the proposed area, and fauna are not taken during the process.	<p>The pipeline runs between the K2 Pit and the K1 Pit and is approximately 2 km in length as shown in figures within the Supporting Documentation.</p> <p>Clearing will be undertaken under Regulation 20 of the <i>Environmental Protection (Clearing of Native Vegetation) Regulations 2004</i> which allows 10 ha of clearing per tenement per financial year where an approval under the Mining Act has been granted.</p> <p>The proposed pipeline corridor is within existing disturbed zones – either historical drill lines and or historical open pit related ground disturbances. The pipeline corridor honours the currently approved Mining Proposal REG ID 47870.</p> <p>The Applicant has raised the potential for fauna mortality Of Brush-tailed Mulgara during clearing and stated that the clearing footprint will be minimised and rehabilitation will occur where possible.</p> <p>Pre-clearing surveys and displacement of Brush-tailed Mulgara would be limited to activities in the Mulga and spinifex on sand Vegetation and Substrate Associations in parts of K2 and Cinnamon.</p>

Appendix 2: Summary of applicant's comments on risk assessment and draft conditions

Condition	Summary of applicant's comment	Department's response
Licence		
Page 1 - Assessed production or design capacity	262,146 tonnes per year modified to 500,000 tonnes per year.	Error noted - updated as requested
1, Table 1 Item 2: Pipeline from K2 Pit to K1 Pit	'Pipeline inside v-notch earthen drains to prevent the spread of any spills should a leak occur and to prevent vehicle collision with the pipeline.' Catalyst requests that the caveat unless the pipeline is buried is added to allow for any road crossings Catalyst should request that the caveat unless the pipeline is buried is added to allow for any road crossings.	Updated as requested
	Requested deletion of text – refer to strikethrough text below: 'A Programable Logic Controller (PLC) mounted to the pump. The PLC will perform flow meter calculation (A = B) or compare the flow rate at A to the flow rate at B and the pump system ; and'	Updated as requested
7, Table 3 Emissions and discharges limits during environmental commissioning	Request that the limit for mine water discharge during commissioning be changed to '80,000 tonnes' (commissioning period runs for up to four weeks).	Updated as requested
16, Table 6 Emissions and discharges limits during time limited operations	Request that the limit for mine water discharge during time-limited operations changed to align with the requested throughput value. This should be amended to the 500,00kL (time limited operations) to allow for the dewatering to occur as quickly as possible. [Note that 250ML over 180 days = 16L/s which may not be sufficient to dewater the infrastructure]; or, amended to 466,560 tonnes for time limited operations (based on a pumping rate of 30L/s).	Updated as requested
Schedule 2: Monitoring, Table 9	Requested deletion of text – refer to strikethrough text below: K1 Pit – dewatering discharge to pit As depicted in Figure 2	Wording retained to specify where K1 Pit discharge is (graphically)

Condition	Summary of applicant's comment	Department's response
	<p>'Sampling of Total CN and WAD-CN in discharge'</p> <p>Delete this requirement, see note in attached licence There is no risk of CN being in the pit or underground mine - please consider removing this requirement. There is no processing at this satellite mine.</p>	<p>Partially updated as requested.</p> <p>As per further correspondence, sampling of Total CN and WAD-CN in the mine dewater is not required as there is no source, however, sampling will be retained in Table 10 Monitoring of groundwater to ensure there is not Total CN and WAD-CN from previous tailings deposition.</p>
<p>Schedule 2: Monitoring, Table 10</p>	<p>Monitoring Location – 'K2 Pit'.</p> <p>Request that monitoring location be changed to 'K1 Pit'</p>	<p>Updated as requested.</p> <p>Table 9 requires monitoring of K1 Pit – dewatering discharge to pit, which is the discharge water from K2 Pit. Therefore, the draft sampling provision ('K2 Pit') will be a duplication and not seen as relevant (draft requirement removed from the final works approval).</p>