



## Application for Works Approval Amendment

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

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<b>Works Approval Number</b>	W6464/2020/1
<b>Works Approval Holder</b>	Calidus Resources Limited
<b>ACN</b>	006 640 553
<b>File Number</b>	DER2020/000476
<b>Premises</b>	Warrawoona Gold Project  G45/345, L45/523, M45/547, M45/552, M45/668, M45/669, M45/670, M45/671  MARBLE BAR WA 6760
<b>Date of Report</b>	6 April 2022
<b>Decision</b>	Revised works approval granted

**ALANA KIDD**

**MANAGER, RESOURCE INDUSTRIES**

an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

## Table of Contents

<b>1. Decision summary</b>	<b>1</b>
<b>2. Scope of assessment</b>	<b>1</b>
2.1 Regulatory framework	1
2.2 Application summary	1
2.2.1 Sedimentation Ponds	2
2.2.2 TSF design	2
2.2.3 Groundwater monitoring bore	3
2.3 Department of Mines, Industry Regulation and Safety (DMIRS) technical advice	4
2.4 Internal technical advice	4
2.4.1 Hyporheic zone creek sediments monitoring bore	4
2.4.2 TSF design modifications	5
<b>3. Risk assessment</b>	<b>5</b>
3.1 Source-pathways and receptors	5
3.1.1 Emissions and controls	5
3.1.2 Receptors	7
3.2 Risk ratings	8
<b>4. Consultation</b>	<b>12</b>
<b>5. Conclusion</b>	<b>12</b>
5.1 Summary of amendments	12
<b>References</b>	<b>13</b>
<b>Appendix 1: Summary of Works Approval Holder’s comments on risk assessment and draft conditions</b>	<b>14</b>
<b>Appendix 2: Application validation summary</b>	<b>15</b>
Table 1: Proposed design or throughput capacity changes	1
Table 2: Works Approval Holder controls	6
Table 3: Sensitive human/ environmental receptors and distance from prescribed activity	7
Table 4. Risk assessment of potential emissions and discharges from the Premises during construction, commissioning and operation	9
Table 5: Consultation	12
Table 6: Summary of works approval amendments	12
Figure 1: Proposed construction details for the hyporheic monitoring bore	4

# 1. Decision summary

Works Approval W6464/2020/1 is held by Calidus Resources Limited (Works Approval Holder) for the Warrawoona Gold Project (the Premises), located at G45/345, L45/523, M45/547, M45/552, M45/668, M45/669, M45/670, M45/671, MARBLE BAR WA 6760.

This Amendment Report documents the assessment of potential risks to the environment and public health from proposed changes to the emissions and discharges during the construction and operation of the Premises. As a result of this assessment, Revised Works Approval W6464/2020/1 has been granted.

The Revised Works Approval issued as a result of this amendment consolidates and supersedes the existing Works Approval previously granted in relation to the Premises.

## 2. Scope of assessment

### 2.1 Regulatory framework

In completing the assessment documented in this Amendment Report, the department 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

On 23 June 2021, the Works Approval Holder submitted an application to the department to amend Works Approval W6464/2020/1 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). On 20 September 2021, the Works Approval Holder also requested to change the prescribed premises boundary to align with the Ministerial Statement boundary. On 27 October 2021, the Works Approval Holder also requested to modify some aspects of the TSF design. The following amendments are being sought:

- Table 1, Item 3 Sedimentation Ponds design modifications;
- Table 1, Item 7 TSF general details, Item 8 TSF permeability demonstrated with testing performed across the areas and Item 9 TSF spigots;
- Table 2, monitoring bore in the hyporheic zone creek sediments on the premises boundary modified to TSFMB12 monitoring well in the creek sediments next to TSFMB04; and
- Prescribed premises boundary modifications.

This amendment is limited only to changes to Category 5 activities from the Existing Works Approval. No changes to the aspects of the Existing Works Approval relating to Categories 64 and 85 have been requested by the Works Approval Holder.

Table 1 below outlines the proposed changes to the existing Works Approval

**Table 1: Proposed design or throughput capacity changes**

Category	Current design throughput capacity	Proposed design throughput capacity	Description of proposed amendment
5	2.5 million tonnes per annual period	2.5 million tonnes per annual period	Modifications to the Sedimentation Ponds design.  Modifications to the monitoring bore in the hyporheic zone creek sediments next to TSFMB04 on the premises boundary modified to TSFMB12 monitoring well in the creek sediments next to TSFMB04

## 2.2.1 Sedimentation Ponds

Condition 1, Table 1 of the Existing Works Approval W6464/2020/1 provides design specifications based on an Annual Recurrence Interval (ARI) of 100 year, 72 hour rainfall duration event. The Works Approval Holder has requested that this be amended to a 10% Annual Exceedance Probability (AEP)-24 hour design criterion.

The Works Approval Holder has sought national and international guidance to determine that a 10% AEP-24 hour design criterion for sedimentation ponds is environmentally acceptable and consistent with comparable mining projects in Western Australia.

Some other aspects of the original design of Sedimentation Pond 1 and Sedimentation Pond 2 have also been modified as a result of difficult ground conditions at the plant area. An assessment found a total sediment pond catchment capacity of 10,054m<sup>3</sup> would be required at the plant. Refinements were then made to the design of the sedimentation ponds for the total capacity requirements (Sedimentation Pond 1 - 2,081 m<sup>3</sup>, Sedimentation Pond 2 - 8,250 m<sup>3</sup>).

## 2.2.2 TSF design

Condition 1, Table 1 of the Existing Works Approval W6464/2020/1 provides design specifications for the TSF. The original design submitted to DWER as part of the Works Approval application in 2020 was based on a bankable feasibility study completed in June 2020, and since then the design has been refined by ATC Williams.

The modifications include:

### Increase in the design tailings storage capacity

There is an increase in the resource in the mine plan and additional tailings storage capacity is required. The mine was originally proposed to operate for a duration of 5.25 years and this has increased to 8 years. With the processing rate at 2.5 Mtpa this brings the required total storage capacity to 17 Mt.

### Modifications to the upstream low permeability zones

The upstream Bituminous geomembrane liner (BGM) liner was included in the TSF design because of concerns that there would not be sufficient suitable low permeable material for a conventional earthfill low permeability zone. During the early stages of development, it was found that there was far more Zone 1 material available on site than originally indicated by the geotechnical investigation. Therefore, the BGM liner on the upstream face was omitted, with the design modified to rely on the low permeability Zone 1 to restrict seepage from the storage.

As part of the original design, the estimated rate for seepage through the foundations (i.e. below the embankment) was 44 m<sup>3</sup>/day (Stage 1) and 53 m<sup>3</sup>/day (Stage 2). The additional seepage through Zone 1 without the BGM liner is estimated to be no more than 4 m<sup>3</sup>/day (conservatively adopting a permeability of  $1 \times 10^{-8}$  m/sec and allowing for approximately 0.5m of decant water ponding over the deposited tailings).

### Modifications to the downstream slope (Stage 1 only)

As part of the re-design the downstream slope of the Stage 1 embankment was changed to 2.5:1. This will be flattened to the final design slope of 3.75:1 as part of Stage 2 construction.

### Modifications to the downstream slope protection (Stage 1 only)

The original design included a layer of Zone 4 (comprising rockfill derived from mine waste ex-pit) as slope protection of the downstream face of the embankment.

The modified mine plan limited the expected supply of Zone 4 at start-up and so this has been omitted from the Stage 1 construction, leaving Zone 3 (gravelly sand) material to form the exposed downstream face. This face will be required to remain for three years after which the Stage 2 raise will be constructed over it. Visual monitoring of the durability of the slope will be

part of routine inspections, and remediation will be undertaken if required.

### Modifications to the deposition arrangements

Minor modifications have been made to the original deposition plan to reduce the initial length of pipeline required and the number of changes to the location of the discharge point of deposition following start-up.

The revised sequence of deposition is:

- Initial deposition from a temporary bund/ramp located in the central valley area of the TSF (six months);
- Deposition from the south side of the TSF (six months); and
- A return to the central deposition position with progressive relocation of the discharge point in an upstream direction in line with the beach profile which develops during deposition.

### **2.2.3 Groundwater monitoring bore**

Condition 4, Table 2 of the Existing Works Approval W6464/2020/1 requires that monitoring be conducted at a monitoring bore in the hyporheic zone creek sediments next to TSFMB04 on the premises boundary. This creek forms a shallow tributary channel in the upper reaches of the Brockman Hay Cutting Creek catchment, close to the catchment divide.

The hyporheic zone is the region of sediment and soil pore space, beneath and alongside a stream bed where groundwater and surface waters mix. A hyporheic monitoring bore involves multi-level water samplers.

*“In arid climates such as the Pilbara, the groundwater is commonly many meters below ground surface. As such, hyporheic zones rarely develop, and for very short durations following large runoff events, when surface water infiltration is sufficient to hydraulically connect the groundwater to the overlying stream channel. Given that almost all the creeks and rivers in the Pilbara are ephemeral, monitoring bores installed within their channel sediments would be expected to be dry for the majority of the year. Potential exceptions may include bores installed along larger river channels, such as the Coongan River near Marble Bar, where the groundwater levels are much shallower.”* (Calidus, 2021)

The Works Approval Holder has stated that it is unlikely that the small creek adjacent to TSFMB04 will develop a hyporheic zone, even after quite large storm events, due to the creek’s position in the catchment in a large unsaturated zone and depth to groundwater at 18 mbgl.

Instead, the Works Approval Holder is proposing to monitor the water quality within the creek sediments near TSFMB04 using a monitoring well located immediately adjacent to the creek bed. The monitoring well will be slotted from the bottom of the bore and not sealed above the slotted section except for a collar at the surface to prevent water flowing into the drilled hole. This type of monitoring well will target any moisture in the creek sediments, which are approximately 2m thick in bore TSFMB04. The monitoring well is likely to be dry for most of the year but retain soil moisture after runoff events to allow for sampling.

## 2.3 Department of Mines, Industry Regulation and Safety (DMIRS) technical advice

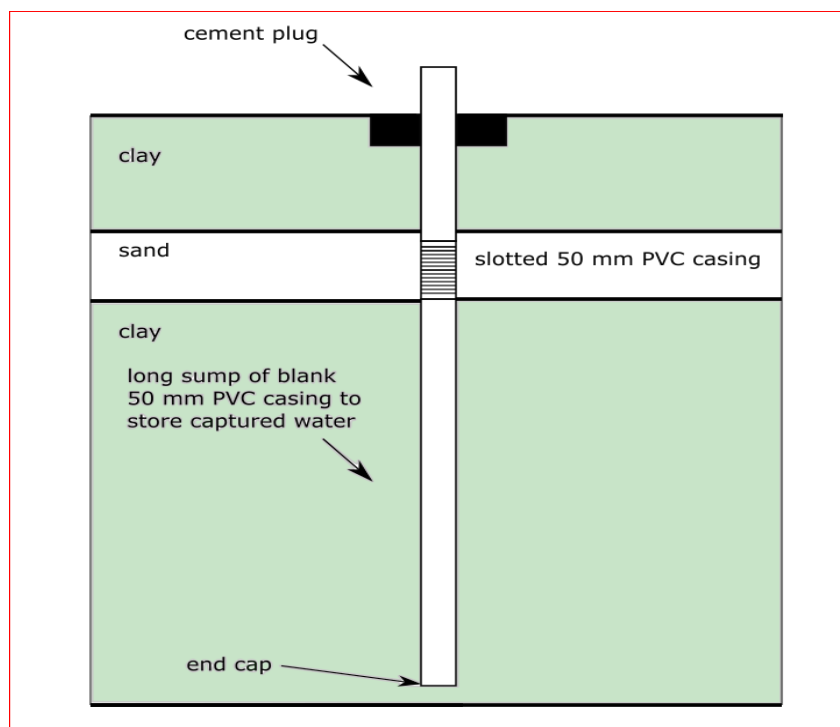
DMIRS has approved the Mining Proposal, which includes the TSF modifications.

## 2.4 Internal technical advice

### 2.4.1 Hyporheic zone creek sediments monitoring bore

The modification of the Hyporheic zone creek sediments monitoring bore next to TSFMB04 on the premises boundary to a groundwater monitoring well in the creek sediments next to TSFMB04 was referred to internal experts for review. The following technical advice was provided:

- Given the likely difficulty of accessing the creek at the drilling site, locating the bore on the edge of the creek bed is considered to be a suitable compromise. It is likely that such a bore would intercept alluvial sediments from historical creek lines, and that these sediments would be in hydraulic connection with sediments in the current creek line;
- Alluvial sediments at the site may only be periodically saturated, and that a bore constructed at the site may only be able to provide groundwater samples intermittently. It is therefore important that the bore is constructed in a manner that will maximise the likelihood of obtaining suitable groundwater samples when the alluvial sediments are saturated after a creek flow event; and
- It is recommended that the bore is constructed with a long section of blank PVC casing below the slotted interval (a “sump”: see Figure 1 below) to enable episodic groundwater flows to be captured within the bore. To obtain and store sufficient water for chemical analysis, it is recommended that this sump is at least two metres long. The section of slotted PVC casing above the sump should also be at least two metres long.



**Figure 1: Proposed construction details for the hyporheic monitoring bore**

As the bore would be constructed in a non-standard way, it would not be possible to obtain groundwater samples from the bore using a conventional pumping technique. The recommended sampling method would be bailing using a stainless-steel bailer. To obtain suitable samples, it would be important that sampling is undertaken as soon as possible when a creek flow event takes place to ensure that stagnant water is not retained in the sump for a long period. The sump should be evacuated after sampling has been completed, to ensure that stagnant water is not retained to mix with future inflows of water to the bore.

It is recommended that the bore is sampled opportunistically whenever it contains water, which would probably only be during and immediately after a creek flow event. However, it is recommended that the presence of water in the bore is assessed on a frequent basis between creek flow events to determine whether additional sampling would need to be undertaken.

## 2.4.2 TSF design modifications

From a hydrogeological perspective, the replacement of the bituminous geomembrane liner with compacted soil materials should have a negligible impact on the hydraulic behaviour of the facility, provided that the compacted materials have a comparable average hydraulic conductivity to the BGL. It is recommended that sufficient wire-line piezometers are installed in embankment walls around the facility to monitor the position of the phreatic surface within tailings on an ongoing basis.

As there is uncertainty associated with the predicted rates of seepage, contingency measures should be incorporated, such as:

- The installation of groundwater recovery bores at suitable locations near the TSF; and
- Thickening of the tailings to reduce their water content and the extent to which seepage could take place.

As noted in Section 3.1:

- Tailings thickened to >65% w/w solids; and
- Installation of seepage recovery bores at the downstream side of the embankment will be a contingency measure if deemed necessary. This will be assessed during the licensing phase with groundwater levels, triggers/limits and a seepage management report incorporated.

## 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 Amendment Report are detailed in Table 2 below. Table 2 also details the proposed control measures the Works Approval Holder has proposed to assist in controlling these emissions, where necessary.



**Table 2: Works Approval Holder controls**

<b>Emission</b>	<b>Sources</b>	<b>Potential pathways</b>	<b>Proposed controls <u>relevant to this Works Approval Amendment</u></b>
Uncontaminated stormwater	Captures uncontaminated stormwater within the Processing Plant facilities	Direct discharge	<ul style="list-style-type: none"> <li>• Designed to contain run off based on an 10% AEP-24 hour duration event;</li> <li>• Sedimentation Pond 1 overflows to Sedimentation Pond 2, which is to have 300mm freeboard; and</li> <li>• Compacted soil (unlined).</li> </ul>
Leachate from tailings storage, containing potentially elevated levels of CCOPC, such as WAD-CN, selenium, arsenic, molybdenum	Tailings from the TSF	Seepage of the tailings through the embankments and base of the TSF	<ul style="list-style-type: none"> <li>• Monitoring bore in the Hyporheic zone creek sediments next to TSFMB04 on the premises boundary modified to groundwater monitoring well in the creek sediments next to TSFMB04. This is because creeks and rivers in the Pilbara are ephemeral so monitoring bores installed within their channel sediments would be expected to be dry for the majority of the year;</li> <li>• Use of low permeability materials in the TSF construction in place of the BGM liner;</li> <li>• Seepage interception trench to be constructed immediately downstream of the main embankment to allow for collection and return of any near surface seepage. The trench will run parallel to the main embankment downstream toes. If seepage is intercepted by the trench, a submersible pump will be installed in a seepage recovery sump to pump water back into the TSF impoundment to be collected by the decant recovery system;</li> <li>• Vibrating Wire Piezometers (WP01, WP02, VWP03, VWP04, VWP05, VWP06);</li> <li>• Tailings thickened to &gt;65% w/w solids; and</li> <li>• Installation of seepage recovery bores at the downstream side of the embankment will be a contingency measure if deemed necessary. This will be assessed during the licensing phase with groundwater levels, triggers/limits and a seepage management report incorporated.</li> </ul>



### 3.1.2 Receptors

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

Table 3 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 3: Sensitive human/ environmental receptors and distance from prescribed activity**

Human receptors	Distance from prescribed activity
Prospector's residence	2.6 km south-west of plant site and 1.5 km south-west of TSF
Corunna Downs Road	2.5 km west of TSF
Environmental receptors	Distance from prescribed activity
Environmentally Sensitive Areas 1 – No listed ESAs within the project area	Nearest ESA is 120km south (object ID 3672, Fortescue Marshes), and 150km south west (object ID 6030 – Mungaroo Range Nature Reserve).
Threatened and/or priority fauna – No sites are diurnal roosts and none are considered critical habitat for the daily and/or long-term survival of the Pilbara Leaf-nosed Bat or Ghost Bat.  A small area (0.8ha) of Northern Quoll and Pilbara Olive Python denning habitat (Rocky Breakaways).  Sandplain habitat (along the southern access road corridor) is significant for Brush-tailed Mulgara (P4, confirmed onsite).	Within project area.
Threatened and/or priority flora – No Threatened Flora have been recorded within the project area.  Five conservation significant (Priority) flora taxa were recorded: <ul style="list-style-type: none"> <li>• <i>Eragrostis crateriformis</i> (P3);</li> <li>• <i>Euphorbia clementii</i> (P3);</li> <li>• <i>Heliotropium murinum</i> (P3);</li> <li>• <i>Josephinia sp. Woodstock</i> (A.A. Mitchell PRP 989) (P1); and</li> <li>• <i>Ptilotus mollis</i> (P4).</li> </ul>	Priority flora within the project area.  The Priority 3 and 4 flora, <i>Eragrostis crateriformis</i> (P3), <i>Euphorbia clementii</i> (P3), <i>Heliotropium murinum</i> (P3) and <i>Ptilotus mollis</i> (P4), all of which are widespread throughout the project area, will be avoided where possible, with infrastructure that is not site dependent positioned to minimise disturbance to these populations.  The one recorded location of <i>Josephinia sp. Woodstock</i> (A.A. Mitchell PRP 989) (P1) will not be disturbed.
Groundwater depth and quality  <i>Rights in Water and Irrigation Act 1914</i>	Groundwater depth is approximately 25mbgl.  Groundwater quality is fresh to slightly brackish and slightly alkaline. Dissolved metals concentrations are generally low, apart from arsenic and iron.  The Premises is located within the Proclaimed Pilbara Groundwater Area and Pilbara Surface Water Area

## 3.2 Risk ratings

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

Where the Works Approval Holder 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 Works Approval Holder'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 Works Approval Holder's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 4.

The Revised Works Approval W6464/2020/1 that accompanies this Amendment Report authorises construction and time-limited operations. The conditions in the Revised Works Approval 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. Categories 5, 64 and 85 activities. A risk assessment for the operational phase has been included in this Amendment Report, however licence conditions will not be finalised until the department assesses the licence application.

**Table 4. Risk assessment of potential emissions and discharges from the Premises during construction, commissioning and operation**

Risk Event					Risk rating <sup>1</sup> C = consequence L = likelihood	Works Approval Holder's controls sufficient?	Conditions <sup>2</sup> of works approval	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Works Approval Holder's controls				
<b>Commissioning and Operations (including Time Limited Operations)</b>								
Sedimentation Ponds modification in design	Sediment laden, and/or potentially contaminated stormwater (likely to be uncontaminated as not collected from within bunded areas)	Direct discharges from overtopping from rainfall events in the vicinity of the mine site causing inundation and/or contamination	Threatened fauna and Priority flora	Refer to Section 3.1	C = Minor L = Unlikely <b>Medium Risk</b>	Y	Condition 1, Table 1 Design and construction / installation requirements Requirements for the Sedimentation Ponds	N/A
Modification of hyporheic zone monitoring bore to creek sediments	Leachate from tailings storage, containing potentially elevated levels of CCOPC, such as WAD-CN, selenium, arsenic, molybdenum	Infiltration through the base, embankments and surface drainage feature that will emerge from the toe of the proposed valley-fill TSF	Hyporheic zone at the surface drainage feature at the toe of the TSF  Groundwater (approximately 25mbgl) and vegetation	Refer to Section 3.1	C = Moderate L = Possible <b>Medium Risk</b>	Y	Condition 4, Table 2 Infrastructure requirements – groundwater monitoring wells Requirement for groundwater monitoring wells to be installed  Condition 8, Table 3 Environmental commissioning requirements Requires that tailings are thickened and daily inspections of seepage trench  Condition 11, Table 10 Ambient groundwater monitoring Requirement to monitor the groundwater at a groundwater monitoring well TSFMB12 in the creek sediments next to TSFMB04 on the premises	N/A

Works Approval: W6464/2020/1

Risk Event					Risk rating <sup>1</sup> C = consequence L = likelihood	Works Approval Holder's controls sufficient?	Conditions <sup>2</sup> of works approval	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Works Approval Holder's controls				
							Condition 16, Table 5 Infrastructure and equipment requirements during time limited operations Requires that tailings are thickened and daily inspections of seepage trench	
Modifications to the TSF	Leachate from tailings storage, containing potentially elevated levels of CCOPC, such as WAD-CN, selenium, arsenic, molybdenum	Infiltration through the base, embankments and surface drainage feature that will emerge from the toe of the proposed valley-fill TSF	Hyporheic zone at the surface drainage feature at the toe of the TSF  Groundwater (approximately 25mbgl) and vegetation	Refer to Section 3.1	C = Moderate L = Possible <b>Medium Risk</b>	Y	Condition 4, Table 2 Infrastructure requirements – groundwater monitoring wells Requirement for groundwater monitoring wells to be installed  Condition 8, Table 3 Environmental commissioning requirements Requires that tailings are thickened and daily inspections of seepage trench  Condition 11, Table 10 Ambient groundwater monitoring Requirement to monitor the groundwater at a groundwater monitoring well TSFMB12 in the creek sediments next to TSFMB04 on the premises  Condition 16, Table 5 Infrastructure and equipment requirements during time limited operations	N/A

Works Approval: W6464/2020/1

Risk Event					Risk rating <sup>1</sup> C = consequence L = likelihood	Works Approval Holder's controls sufficient?	Conditions <sup>2</sup> of works approval	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Works Approval Holder's controls				
							Requires that tailings are thickened and daily inspections of seepage trench	

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

Note 2: Proposed Works Approval Holder's controls are depicted by standard text. **Bold and underline text** depicts additional regulatory controls imposed by department.

## 4. Consultation

Table 5 provides a summary of the consultation undertaken by the department.

**Table 5: Consultation**

Consultation method	Comments received	Department response
Works Approval was provided with draft amendment on (07/10/2021)	Works Approval Holder replied 27/10/2021 with additional modifications requested for the TSF.	Assessment of additional modifications.
Works Approval was provided with draft amendment on (03/03/2022)	Works Approval Holder replied 29/03/2022 Refer to Appendix 1	Works Approval Holder replied 29/03/2022 Refer to Appendix 1

## 5. Conclusion

Based on the assessment in this Amendment Report, the Delegated Officer has determined that a Revised Works Approval will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

### 5.1 Summary of amendments

Table 6 provides a summary of the proposed amendments and will act as record of implemented changes. All proposed changes have been incorporated into the Revised Works Approval as part of the amendment process.

**Table 6: Summary of works approval amendments**

Condition no.	Proposed amendments
1, Table 1	Modifications to the Sedimentation Ponds Design and construction / installation requirements. Modifications to the TSF general details Design and construction / installation requirements. Modifications to the TSF permeability demonstrated with testing performed across the areas Design and construction / installation requirements. Modifications to the TSF spigots Design and construction / installation requirements.
4, Table 2	TSF has been added as a prefix to the TSF bores to prevent confusion with regional bores which have the same name. Groundwater monitoring bore in the Hyporheic zone creek sediments next to MB04 on the premises boundary modified to TSFMB12 in the creek sediments next to TSFMB04 Addition of Note 2 for bore construction. Renumbering of vibrating wire piezometers.
Schedule 1: Maps	Updated maps to show TSFMB12 next to TSFMB04 on the premises boundary.
Definitions	Inclusion of definition for Annual Exceedance Probability (AEP)

## 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. Calidus Resources Limited, W6464/2020/1 - Works Approval Amendment Application 23/06/2021, Perth, Western Australia.
5. Calidus Resources Limited, RE: APPLICANT NOTIFICATION - NOTICE OF PROPOSED AMENDMENT TO WORKS APPROVAL W6464/2020/1 27/10/2021, Perth, Western Australia.
6. Calidus Resources Limited, RE: APPLICANT NOTIFICATION - NOTICE OF PROPOSED AMENDMENT TO WORKS APPROVAL W6464/2020/1 27/10/2021, Perth, Western Australia.
7. DMIRS, RE: APPLICANT NOTIFICATION - NOTICE OF PROPOSED AMENDMENT TO WORKS APPROVAL W6464/2020/1 28/02/2022, Perth, Western Australia.
8. Calidus Resources Limited, RE: NOTIFICATION: NOTICE OF PROPOSED AMENDMENT TO WORKS APPROVAL W6464/2020/1 29/03/2022, Perth, Western Australia.



## Appendix 1: Summary of Works Approval Holder's comments on risk assessment and draft conditions

Condition	Summary of Works Approval Holder's comment	Department's response
1, Table 1	<p>Processing Plant:</p> <ul style="list-style-type: none"> <li>Processing Plant description updated to remove secondary ball mill. This was subsequently removed from the scope of work during comminution trade off studies and third-party reviews of the comminution circuit;</li> <li>Dust collector not installed at crusher discharge conveyor, this was oversight in original Works Approval application and was never part of the scope of works for construction. Dust is controlled at the crusher via sprays at the tipping area of the crusher.</li> </ul>	Updated as requested.
	<p>Sedimentation Ponds:</p> <ul style="list-style-type: none"> <li>Sedimentation Pond 2: Pond dimensions original wording has not been crossed out. Length = 100m, Width – 23-40m.</li> </ul>	Updated as requested.

## Appendix 2: Application validation summary

SECTION 1: APPLICATION SUMMARY				
<b>Application type</b>				
Works approval	<input type="checkbox"/>			
Licence	<input type="checkbox"/>	Relevant works approval number:		None <input type="checkbox"/>
		Has the works approval been complied with?	Yes <input type="checkbox"/> No <input type="checkbox"/>	
		Has time limited operations under the works approval demonstrated acceptable operations?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	
		Environmental Compliance Report / Critical Containment Infrastructure Report submitted?	Yes <input type="checkbox"/> No <input type="checkbox"/>	
		Date Report received:		
Renewal	<input type="checkbox"/>	Current licence number:		
Amendment to works approval	<input checked="" type="checkbox"/>	Current works approval number:	W6464/2020/1	
Amendment to licence	<input type="checkbox"/>	Current licence number:		
		Relevant works approval number:	N/A	<input type="checkbox"/>
Registration	<input type="checkbox"/>	Current works approval number:	None	<input type="checkbox"/>
Date application received	23 June 2021			
<b>Applicant and Premises details</b>				
Applicant name/s (full legal name/s)	Calidus Resources Limited			
Premises name	Warrawoona Gold Project			
Premises location	G45/345, L45/523, M45/547, M45/552, M45/668, M45/669, M45/670, M45/671, MARBLE BAR WA 6760			
Local Government Authority	SHIRE OF EAST PILBARA			
<b>Application documents</b>				
HPCM file reference number:	DWERDT468725			
Key application documents (additional to application form):	Supporting documentation			
<b>Scope of application/assessment</b>				

Summary of proposed activities or changes to existing operations.	Works approval amendment: <ul style="list-style-type: none"> <li>• Table 1, Item 3 Sedimentation Ponds design modifications; and</li> <li>• Table 2, Groundwater monitoring bore in the Hyporheic zone creek sediments next to MB04 on the premises boundary modified to groundwater monitoring well in the creek sediments next to MB04.</li> </ul>	
Category number/s (activities that cause the premises to become prescribed premises)		
Table 1: Prescribed premises categories		
Prescribed premises category and description	Assessed production or design capacity	Proposed changes to the production or design capacity (amendments only)
Category 5: Processing or beneficiation of metallic or non metallic ore	2.5 million tonnes per annual period	N/A
Category 64: Class II or III putrescible landfill site	1,500 tonnes per annual period	N/A
Category 85: Sewage facility	50 m <sup>3</sup> /day	N/A
Legislative context and other approvals		
Has the applicant referred, or do they intend to refer, their proposal to the EPA under Part IV of the EP Act as a significant proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Referral decision No: N/A Managed under Part V <input type="checkbox"/> Assessed under Part IV <input type="checkbox"/>
Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Ministerial statement No: 1150 EPA Report No: 1681
Has the proposal been referred and/or assessed under the EPBC Act?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Reference No: EPBC 2019/8584
Has the applicant demonstrated occupancy (proof of occupier status)?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Certificate of title <input type="checkbox"/> General lease <input type="checkbox"/> Expiry: Mining lease / tenement <input type="checkbox"/> Expiry: Other evidence <input type="checkbox"/> Expiry:
Has the applicant obtained all relevant planning approvals?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Approval: Expiry date: If N/A explain why?
Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	CPS No: MS1150

Has the applicant applied for, or have an existing CAWS Act clearing licence in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Application reference No: N/A Licence/permit No: N/A
Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Application reference No: Licence/permit No: GWL204411(2)
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Name: N/A Type: N/A Has Regulatory Services (Water) been consulted? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Regional office: North West
Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Name: N/A Priority: N/A Are the proposed activities/ landuse compatible with the PDWSA (refer to <a href="#">WQPN 25</a> )? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Is the Premises subject to any other Acts or subsidiary regulations (e.g. <i>Dangerous Goods Safety Act 2004, Environmental Protection (Controlled Waste) Regulations 2004, State Agreement Act xxx</i> )	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
Is the Premises within an Environmental Protection Policy (EPP) Area?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
Is the Premises subject to any EPP requirements?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
Is the Premises a known or suspected contaminated site under the <i>Contaminated Sites Act 2003</i> ?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Classification: N/A Date of classification: N/A

