



## Application for Works Approval

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

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|                              |   |
|------------------------------|---|
| <b>Works Approval Number</b> | W6689/2022/1  |
| <b>Applicant</b>             | Kalgoorlie Consolidated Gold Mines Pty Ltd  |
| <b>ACN</b>                   | 009 377 619   |
| <b>File number</b>           | DER2022/000170  |
| <b>Premises</b>              | Fimiston Processing Plant<br>Tenements M26/383, M26/294, M26/359<br>KALGOORLIE WA 6430<br>As defined by the premises map attached to the issued works approval. |
| <b>Date of report</b>        | 12 October 2022   |
| <b>Decision</b>              | Works approval granted  |

**A/MANAGER, RESOURCE INDUSTRIES  
REGULATORY SERVICES**

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

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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 upgraded Fimiston Processing Plant. As a result of this assessment, works approval W6689/2022/1 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 20 April 2022, the Kalgoorlie Consolidated Gold Mines Pty Ltd (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 and time limited operations relating to the revitalisation of the Fimiston Processing Plant at the premises, which is a part of the wider Kalgoorlie Consolidated Gold Mines (KCGM) operations. The Fimiston Processing Plant is currently authorised under licence L6420/1988/14 to undertake Category 5 activities with an assessed production capacity of 14.5 million tonnes per annum (mtpa).

The revitalisation will result in an increase in the throughput of the processing plant from 14.5 mtpa to 23.5 mtpa of ore processed. The premises is located adjacent to the Kalgoorlie-Boulder township, with the processing plant precinct approximately 2 km west of the nearest residential premises.

The works proposed includes the revitalisation of the following major circuits of the plant:

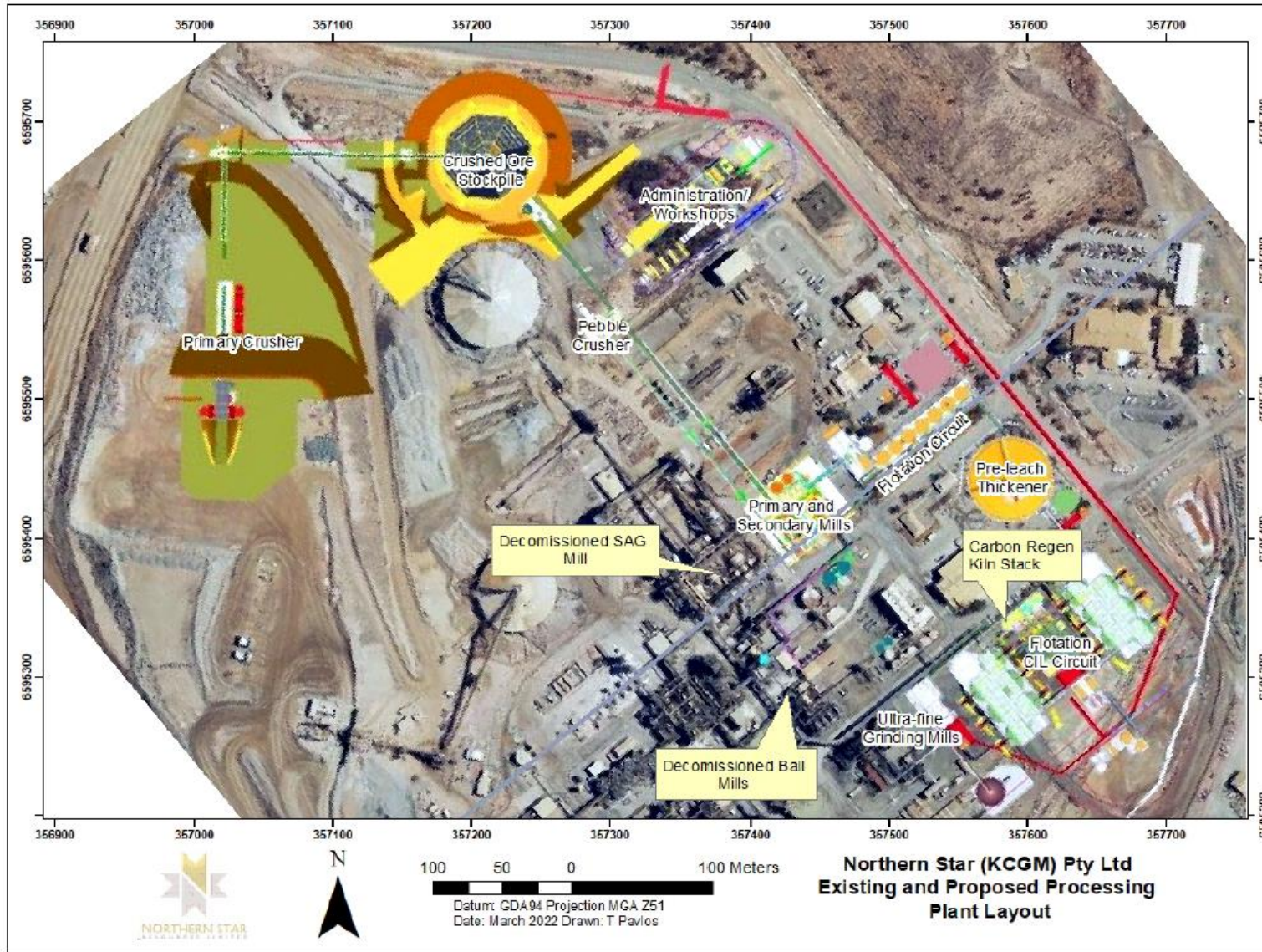
- Addition of a new primary crusher and covered coarse ore stockpile;
- Additional milling capacity with an 18 MW SAG Mill and 22 MW Ball Mill;
- Additional rougher floatation cells and re-purposing of existing floatation circuits;
- Addition of a 60 m pre-leach thickener for floatation tails;
- New floatation tails carbon-in-leach (CIL) circuit, with dedicated elution and carbon regeneration circuit (including a new duplicated kiln off-gas cleaning circuit [KOGCC] without a Regenerative Thermal Oxidiser [RTO]); and
- Potential to replace the Gidji flowsheet at Fimiston, repurposing some of the existing CIL circuits.

The following existing components will be made redundant as a result of the processing plant upgrade:

- Existing ball mill gravity circuits;
- Existing trash screens;
- Existing floatation cells;
- Existing 27 m diameter pre-leach thickener;
- Existing contract crushing circuit; and
- Existing Mt Charlotte comminution circuit.

The layout and process flow of the proposed infrastructure upgrade is shown in Figure 1 and Figure 2, respectively.

The premises relates to the category and assessed production capacity under Schedule 1 of the *Environmental Protection Regulations 1987* (EP Regulations), which are defined in works approval W6689/2022/1.



**Figure 1: Proposed conceptual layout of Fimiston processing plant revitalisation**

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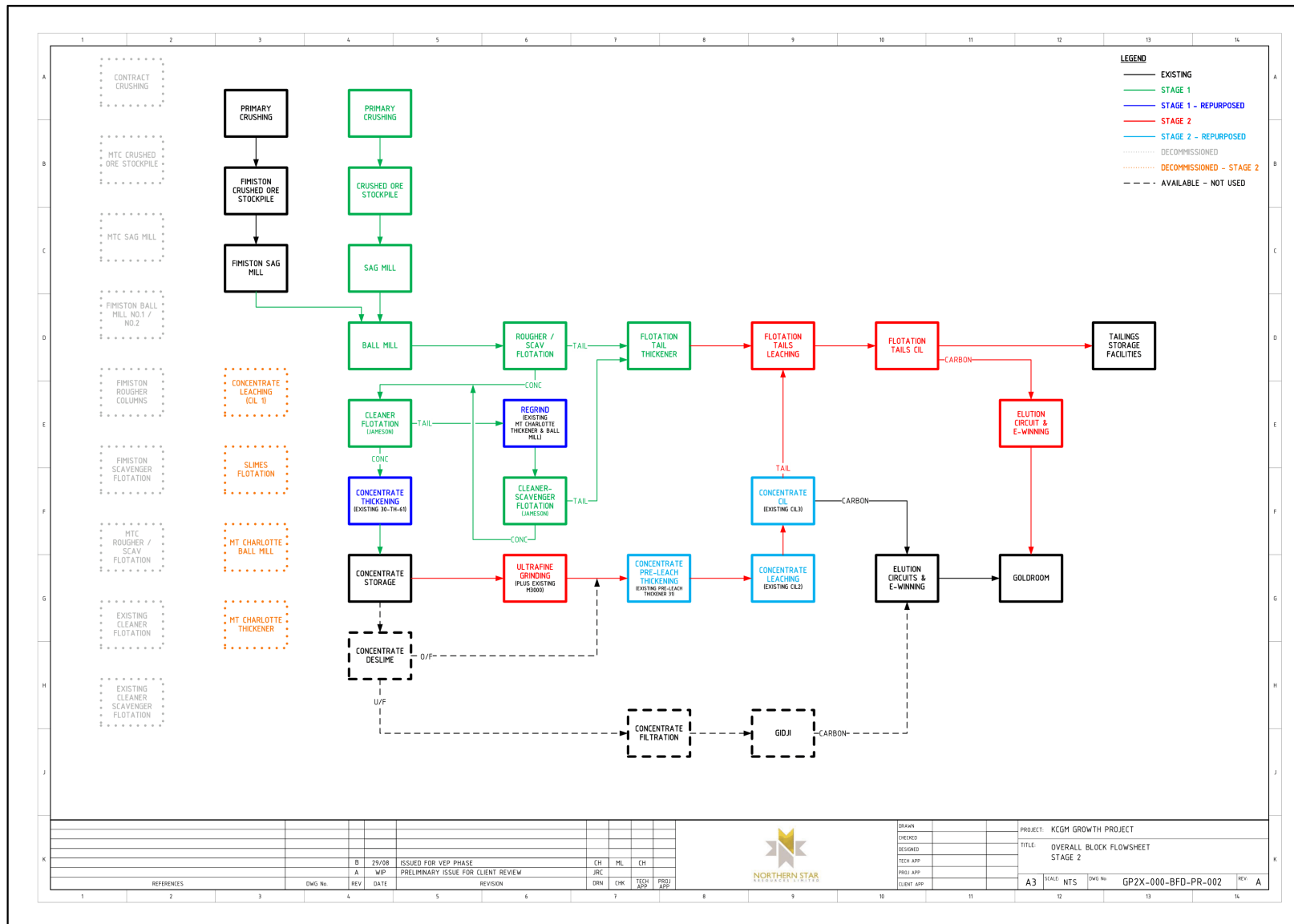


Figure 2: Process block flowsheet of Fimiston processing plant revitalisation

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## 2.3 Part IV of the EP Act

Ministerial Statement 782 (MS 782) was granted by the Minister for Environment for the Fimiston Gold Mine Operations Extension (Stage 3) and Mine Closure Planning on 29 January 2009. However, the scope of the Fimiston Processing Plant Revitalisation was not referred to the Environmental Protection Authority (EPA) for assessment, as it was considered that the impacts associated with the increase in production capacity at the processing plant can be adequately managed under Part V of the EP Act (Refer to Attachment 3 of MS 782).

## 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 2020b).

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 1 below. Table 1 also details the control measures the applicant has proposed to assist in controlling these emissions, where necessary.

**Table 1: Proposed applicant controls**

| Emission            | Sources  | Potential pathways      | Proposed controls  |
|---------------------|--|-------------------------|--|
| <b>Construction</b> |  |                         |  |
| Dust                | Construction of processing plant infrastructure<br>Vehicle movements | Air / windborne pathway | <ul style="list-style-type: none"> <li>▪ The use of water carts on site to minimise the dust generated by vehicle movement.</li> <li>▪ Clearing and other dust-generating activities are conducted during suitable conditions.</li> <li>▪ Visual dust inspections are conducted daily.</li> </ul>  |
| Noise               | Construction of processing plant infrastructure<br>Vehicle movements | Air / windborne pathway | <ul style="list-style-type: none"> <li>▪ A 15m high earth sound bound has been constructed between the Fimiston mining area and the Kalgoorlie-Boulder township.</li> <li>▪ KCGM utilises five "real-time" noise monitoring sites within the Kalgoorlie townsite.</li> <li>▪ Compliance environmental noise monitoring in accordance with MS 782 is completed each quarter by specialist noise consultants using a manned sound level meter.</li> <li>▪ The processing plant is located to the east of the ROM Pad, at a lower elevation, acting as a noise mitigation for all processing equipment except the crusher.</li> </ul> |



| Emission   | Sources   | Potential pathways                             | Proposed controls  |
|--|---|--|--|
| Construction waste (concrete footings/plinths etc) | Decommissioned infrastructure at processing plant precinct        | Direct discharge to land via onsite landfills. | <p><b><u>Outside scope of works approval</u></b></p> <p>Not assessed as part of this works approval as discharges to onsite landfills have been previously assessed under other approvals.</p> <p>Majority of waste will be sent offsite for recycling.</p> <p>Some construction wastes and concrete will be disposed of within onsite inert landfills. Approximately 7,000 tonnes of waste (mostly decommissioned concrete footings/plinths) will be disposed of within onsite landfill facilities.</p> <p>The applicant holds licence L6420/1988/14 which authorises a Class I Inert Landfill onsite (Category 63) with an approved capacity of 15,000 tonnes per year. In 2021, 339.3 tonnes of inert waste was disposed of within this landfill. Therefore, there is capacity for the existing premises landfill facilities to accept waste and remain within authorised production capacity.</p>  |
| <b>Commissioning and Time Limited Operation</b>    |   |  |  |
| Dust   | Crushing of material, vehicle movements, lift-off from stockpiles | Air / windborne pathway                        | <ul style="list-style-type: none"> <li>▪ Dust control on the crushing circuit consists of water sprays on the ROM bin, dust extraction units on the crusher discharge and screen discharge chute.</li> <li>▪ Dust extraction will be run by a baghouse which is located next to the crushers, adjacent to the ROM pad.</li> <li>▪ All transfer points will be equipped with rubber sealing and skirting to contain dust generated.</li> <li>▪ The new crushed ore stockpile will have a stockpile cover to mitigate fugitive dust.</li> <li>▪ Plan activities in high-risk areas (e.g. digging/loading) during day shift when fugitive dust can be seen and managed, where practicable.</li> <li>▪ Use of additional dust control measures (i.e. a dust binding agent), where necessary.</li> <li>▪ Visual dust inspections are conducted daily.</li> <li>▪ The use of water carts on site to minimise the dust generated by vehicle movement.</li> <li>▪ In accordance with Condition 7-1 of MS 782, the applicant proactively manage dust at its Fimiston Operations (under its Fimiston Air Quality Management Plan) to ensure that the 24-hour average PM<sub>10</sub> levels at designated dust monitoring points within the town of Kalgoorlie Boulder are less than 50 µg/m<sup>3</sup>. Continuous PM<sup>10</sup> dust monitoring is</li> </ul> |

| Emission                         | Sources                                      | Potential pathways      | Proposed controls  |
|----------------------------------|--|-------------------------|--|
|                                  |  |                         | <p>undertaken at seven monitoring locations stations within the Kalgoorlie-Boulder township, using Thermo Beta Attenuation Monitor (BAM) samplers, fitted with PM<sup>10</sup> inlets.</p>   |
| Noise                            | Crushing of material, operation of machinery | Air / windborne pathway | <ul style="list-style-type: none"> <li>▪ 15m high earth sound bound has been constructed between the Fimiston mining area and township.</li> <li>▪ KCGM utilizes five "real-time" noise monitoring sites within the Kalgoorlie townsite.</li> <li>▪ Compliance environmental noise monitoring in accordance with MS 782 is completed each quarter by specialist noise consultants using a manned sound level meter.</li> <li>▪ The processing plant is located to the east of the ROM Pad, at a lower elevation, acting as a noise mitigation for all processing equipment except the crusher.</li> <li>▪ An environmental noise assessment for the processing plant revitalisation was completed to ensure that predicted noise levels remained under those prescribed in the Environmental Protection (Fimiston Gold Mine Noise Emissions) Approval 2016.</li> </ul>   |
| Air emissions – Mercury and VOCs | New carbon regeneration kiln                 | Air / windborne pathway | <ul style="list-style-type: none"> <li>▪ The new carbon regeneration kiln will be fitted with a kiln off-gas cleaning circuit (KOGCC), consisting of a wet scrubber (Venturi and Packed Bed) and carbon filter beds. This will reduce mercury and volatile organic compound (VOC) emissions.</li> <li>▪ Mercury emissions from the wider KCGM operations are reported annually to DWER via the national pollution inventory (NPI). Air emission monitoring conditions are not on the premises operating licence.</li> <li>▪ The applicant has completed emissions modelling based on four different scenarios regarding the processing plant revitalisation. The results of the assessment show that predicted ground level concentrations (GLCs) for all compounds are below the relevant ambient air quality criteria at all locations (onsite and offsite) within the modelled domain for all scenarios.</li> <li>▪ A post-commissioning air emission sampling program will be implemented to verify air emission model results. The applicant has committed to providing this to the department prior to commissioning of the revitalised processing plant.</li> </ul> |

| Emission                                     | Sources  | Potential pathways                                     | Proposed controls  |
|--|--|--|--|
|  |  |  | <ul style="list-style-type: none"> <li>▪ Mercury emissions are managed in accordance with Fimiston Air Quality Management Plan (FAQMP) required under Condition 7 of MS 782.</li> </ul> <p>The FAQMP outlines, in Section 4.1.2, that the existing KOGCC is designed to capture more than 90% of gaseous mercury emissions from the carbon regeneration kilns. No mercury monitoring program has been outlined within the FAQMP. A mercury balance will be developed using post-commissioning monitoring data to determine whether the plant meets the design criteria of 90% reduction in total gaseous mercury emissions.</p> <ul style="list-style-type: none"> <li>▪ As a contingency measure, the new carbon regeneration kiln will be designed such that an RTO can be retrofitted, should the post-commissioning results deviate from modelling predictions.</li> </ul>   |
| Contaminated stormwater                      | Run-off from within processing areas                                       | Overland flow and discharged offsite                   | <ul style="list-style-type: none"> <li>▪ Currently, the processing facility drains to the south of the plant into three water catchment ponds providing a total of 24,450 m<sup>3</sup> of containment, in addition to the bunds and sumps around existing infrastructure. This will be retained unmodified.</li> <li>▪ In addition to the three existing 24,450 m<sup>3</sup> event ponds, an additional catchment pond with 18,890 m<sup>3</sup> of storage capacity will be constructed. The pond will be HDPE-lined.</li> <li>▪ The required volume for the additional catchment pond was calculated based on the area of the processing plant facility in order to accommodate a 1 in 25-year rain event (96 mm in 24 hours) and 110% the volume of the largest vessel containing solution.</li> <li>▪ Recovery pumps will be fitted to the ponds, including telemetry to pump into the raw water dams to be used in the processing plant.</li> </ul> |
| Spills and leaks of hydrocarbons / chemicals | Plant equipment, storage of hydrocarbons / chemicals within plant precinct | Direct discharge to land - impacting soils/groundwater | <ul style="list-style-type: none"> <li>▪ Secondary containment infrastructure (e.g. bunds and sumps) will be constructed for all infrastructure containing solution.</li> <li>▪ New plant components will be constructed to meet relevant Australian Standards and installed within concrete hardstand and bunded areas.</li> <li>▪ All hydrocarbons storage areas will be adequately bunded to ensure any spills or leaks are contained.</li> </ul>   |

| Emission                                  | Sources  | Potential pathways           | Proposed controls  |
|---|--|------------------------------|--|
|   |  |                              | <ul style="list-style-type: none"> <li>▪ Spill kits are located in hydrocarbon storage areas.</li> <li>▪ In the event of a spill, contaminated soil is collected and removed to the bioremediation area for treatment.</li> <li>▪ Education and training is provided to personnel working on site regarding the correct storage and management of hydrocarbons and chemicals, as well as procedures for clean-up and remediation in the event of a spill.</li> </ul>   |
| Mercury waste (mercury laden carbon etc.) | KOGCC carbon filters   | Direct discharge to land     | <p><b><u>Outside scope of works approval</u></b></p> <p>Emissions and discharges from this facility have been assessed under previous approvals.</p> <p>Mercury waste will be stored within existing mercury storage facility. No changes to this facility are required due to the increase in throughput.</p> <p>There is an agreement in place with Tellus Waste Services for the removal and disposal of the mercury waste to the Sandy Ridge waste disposal facility.</p>  |
| Tailings                                  | Increased ore processing resulting in increase in tailings waste | Discharge to land<br>Seepage | <p><b><u>Outside scope of works approval</u></b></p> <p>This emission has already been assessed as existing tailings storage facilities (TSFs) have capacity for increased tailings for 24 months. An additional 24 months of storage has been assessed under works approval W6496/2021/1 – Fimiston TSF II Extension (Cells E and F).</p> <p>Additional tailings storage after this will need to be approved by the Environmental Protection Authority (EPA) under Part IV of the EP Act and DWER under Part V of the EP Act for the construction of new TSF cells.</p> |

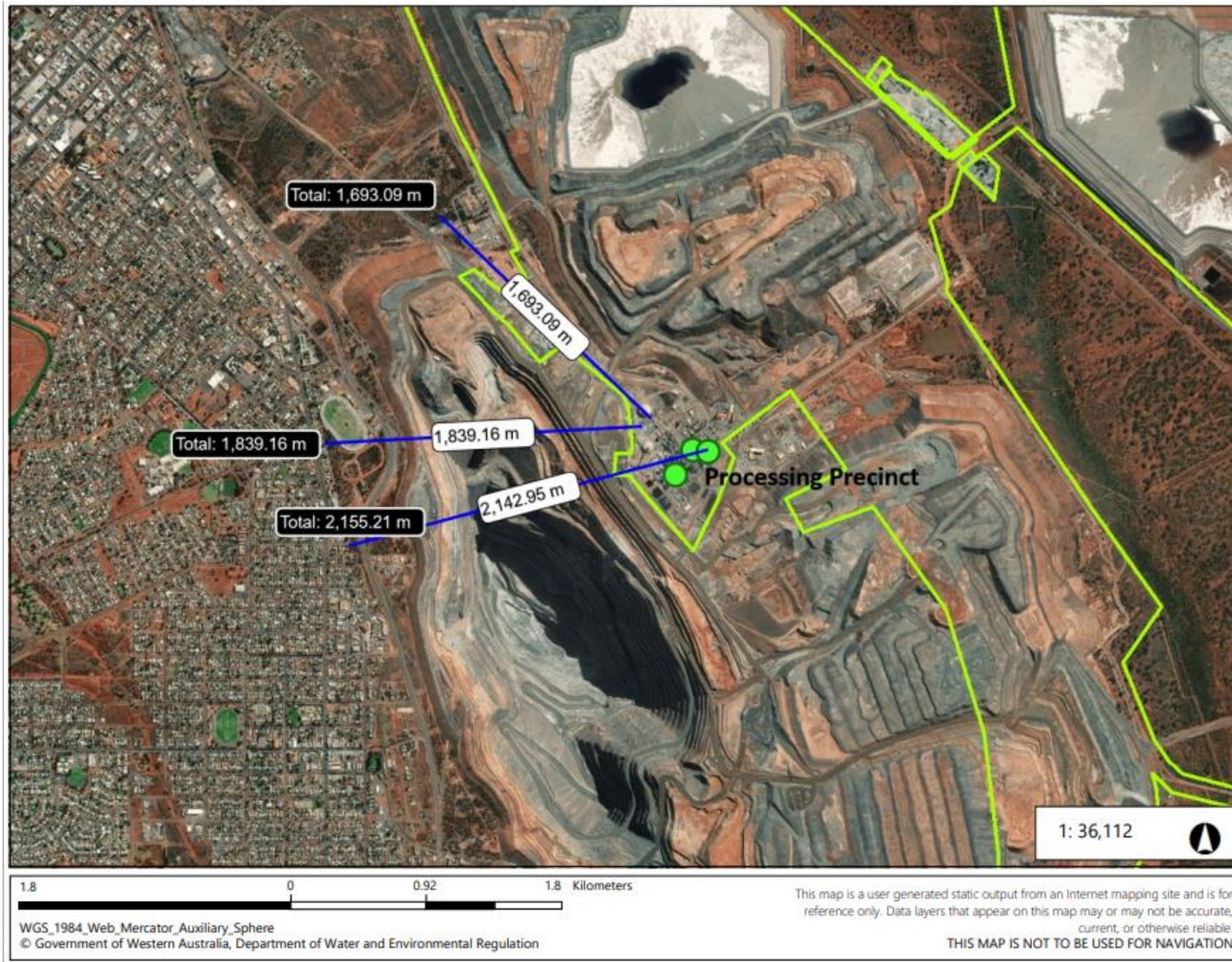
### 3.1.2 Receptors

In accordance with the *Guideline: Risk Assessment* (DWER 2020b), 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 2 and Figure 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 2020a)).

**Table 2: Sensitive human and environmental receptors and distance from prescribed activity**

| Human receptors                                   | Distance from prescribed activity  |
|---|--|
| Residents within the City of Kalgoorlie - Boulder | <p>Town of Kalgoorlie is located at western edge of Fimiston Open Pit (Super Pit).</p> <p>The premises is located approximately 1.8 km to 2.1 km east of the closest residential properties (Super Pit is located between the premises and residential properties).</p>  |
| Environmental receptors                           | Distance from prescribed activity  |
| Remnant native vegetation                         | <p>Vegetation community surrounding the premises is characterised by open woodland comprising <i>Corymbia calophylla</i>, <i>Eucalyptus wandoo</i> and <i>E. camaldulensis</i>. This vegetation community is common and widespread in the region. There were no conversation significant flora species found.</p> <p>There are remnant vegetation occurring east and north of the premises, with the closest being approximately 1.6 km from the premises.</p> <p>However, remnant vegetation in the area is sparse and relatively degraded due to historical activities and the wider KCGM operation.</p> |
| Underlying groundwater                            | <p>Local groundwater depth ranges between 5 meters below ground level (mbgl) to 20 mbgl and is hypersaline. Data was obtained from compliance monitoring bores around Fimiston operations tailings storage facility.</p> <p>Groundwater in the region may be used for non-potable purposes, though there is unlikely to be any third-party groundwater users in the vicinity of the premises due to the siting of the wider KCGM operation.</p>  |



**Figure 3: Distance to sensitive receptors**

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## 3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020b) 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 3.

Works approval W6689/2022/1 that accompanies this Decision Report authorises construction and time-limited operations. The conditions in the issued works approval, as outlined in Table 3 have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

An amendment to licence L6420/1988/14 is required following the time-limited operational phase authorised under the works approval to authorise emissions associated with the ongoing operation of the revitalised processing plant. 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 3: Risk assessment of potential emissions and discharges from the premises during construction, commissioning and time limited operation**

| Risk events   |  |   |  |                      | Risk rating <sup>1</sup><br>C = consequence<br>L = likelihood | Applicant controls sufficient? | Conditions <sup>2</sup> of works approval  | Justification for additional regulatory controls   |
|---|--|---|--|----------------------|---|--------------------------------|--|--|
| Sources / activities  | Potential emission                           | Potential pathways and impact   | Receptors  | Applicant controls   |   |                                |  |  |
| <b>Construction</b>   |  |   |  |                      |   |                                |  |  |
| Construction of new ore processing plant infrastructure   | Dust   | <b>Pathway:</b> Air / windborne pathway   | Residential premises in Kalgoorlie township<br>Native vegetation | Refer to Section 3.1 | C = Slight<br>L = Unlikely<br><b>Low Risk</b>                 | Y                              | Condition 1: Dust suppression using water trucks and routine inspection  | The Delegated Officer considers the proposed controls to be adequate for managing dust emissions from impacting sensitive human and environmental receptors.<br><br>Furthermore, the construction works are likely to be undertaken over a short period of time.   |
| Earthworks<br>Vehicle movement  | Noise  | <b>Impact:</b> Impacts to human health and amenity  | Residential premises in Kalgoorlie township                      | Refer to Section 3.1 | C = Slight<br>L = Unlikely<br><b>Low Risk</b>                 | Y                              | N/A  | The Delegated Officer considers the proposed controls, which are currently being implemented for the wider KCGM operations under MS 782, to be adequate for managing noise emissions from impacting sensitive human receptors.<br><br>Furthermore, the construction works are likely to be undertaken over a short period of time.   |
| <b>Commissioning and Operation (including time-limited-operations operations)</b>                                       |  |   |  |                      |   |                                |  |  |
| Operation of new ore processing plant infrastructure.<br><br>(Increase in production throughput from 14.5 to 23.5 mtpa) | Dust   | <b>Pathway:</b> Air / windborne pathway<br><br><b>Impact:</b> Impacts to human health and amenity | Residential premises in Kalgoorlie township                      | Refer to Section 3.1 | C = Minor<br>L = Unlikely<br><b>Medium Risk</b>               | Y                              | Condition1: Primary crusher circuit design and construction requirements<br><br>Condition 8: Environmental commissioning requirements<br><br>Condition 15: Primary crusher circuit operational requirement   | Applicant's proposed infrastructure controls (i.e. water sprays on ROM bin, dust extraction units on the crusher discharge and screen discharge chute, dust collection via bag house, transfer points to be equipped with rubber sealing and skirting to contain dust and cover on the crushed ore stockpile) are sufficient to control the increase in dust emissions generated by the new infrastructure. These controls will be conditioned within works approval, in accordance with <i>Guideline: Risk Assessments</i> (DWER 2020b).<br><br>In accordance with Condition 7-1 of MS 782, the applicant proactively manages dust at its Fimiston Operations (under its Fimiston Air Quality Management Plan) to ensure that the 24-hour average PM <sub>10</sub> levels at designated dust monitoring points within the town of Kalgoorlie-Boulder is less than 50 µg/m <sup>3</sup> .<br><br>Continuous PM <sup>10</sup> dust monitoring is undertaken at seven monitoring locations stations within the town, using Thermo Beta Attenuation Monitor (BAM) samplers, fitted with PM <sup>10</sup> inlets.<br><br>As such, no additional operational controls are required to manage dust emissions during commissioning and time limited operations. |
|   | Noise  |   |  |                      | C = Moderate<br>L = Possible<br><b>Medium Risk</b>            | Y                              | None.  | Refer to Section 3.3.  |
|   | Air emissions from stacks – mercury and VOCs | <b>Pathway:</b> Air / windborne pathway<br><br><b>Impact:</b> Impacts to human health             |  |                      | C = Minor<br>L = Unlikely<br><b>Medium Risk</b>               | Y                              | Condition1: Carbon regeneration kiln design and construction requirements<br><br>Condition 8: Environmental commissioning requirements<br><br>Condition 10: Authorised emission point during environmental commissioning<br><br>Condition 15: Carbon regeneration kiln operational requirement<br><br>Condition 16: Authorised emission point during time limited operation<br><br>Condition 17: Post-commissioning air emission monitoring requirements | Refer to Section 3.4.  |
|   | Contaminated stormwater                      | <b>Pathway:</b> Overland runoff during rainfall event<br><br><b>Impact:</b> Impact                | Native vegetation  | Refer to Section 3.1 | C = Minor<br>L = Rare<br><b>Low Risk</b>                      | Y                              | Condition1: Stormwater management infrastructure design and construction requirements<br><br>Condition 8: Environmental commissioning  | Applicant's proposed infrastructure controls (i.e. existing and proposed drainage features and catchment pond, proposed freeboard and reuse of stormwater into processing circuit) are sufficient to control overland flow of contaminated stormwater. These controls will be conditioned within the works approval, in accordance with <i>Guideline: Risk Assessments</i> (DWER 2020b).   |



| Risk events          |                                   |  |  |                      | Risk rating <sup>1</sup><br>C = consequence<br>L = likelihood | Applicant controls<br>sufficient? | Conditions <sup>2</sup> of works approval   | Justification for additional regulatory controls   |
|----------------------|-----------------------------------|--|--|----------------------|---|-----------------------------------|---|--|
| Sources / activities | Potential<br>emission             | Potential<br>pathways and<br>impact  | Receptors  | Applicant controls   |   |                                   |   |  |
|                      |                                   | to ecosystem health and amenity  |  |                      |   |                                   | requirements<br>Condition 15: Stormwater management infrastructure design and construction requirements   | As such, no additional operational controls are required to manage contaminated stormwater emissions during commissioning and time limited operations.   |
|                      | Hydrocarbon / processing reagents | <b>Pathway:</b> Loss of containment, leaks and spills<br><b>Impact:</b> Discharge to land, resulting in ecosystem disturbance. | Surrounding soils and remnant native vegetation<br>Groundwater | Refer to Section 3.1 | C = Slight<br>L = Unlikely<br><b>Low Risk</b>                 | Y                                 | Condition1: Fimiston processing plant design and construction requirements<br>Condition 8: Environmental commissioning requirements<br>Condition 15: Fimiston processing plant design and construction requirements | Applicant's proposed infrastructure controls (i.e. secondary containment infrastructure, including bunds and sumps, spill kits, clean-up procedures) are sufficient to control loss of containment of hydrocarbon and processing reagents. These controls will be conditioned within the works approval, in accordance with <i>Guideline: Risk Assessments</i> (DWER 2020b).<br><br>As such, no additional operational controls are required to manage loss of containment of hydrocarbon / processing reagent during commissioning and time limited operations. |

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.

## 3.3 Detailed risk assessment for noise emissions during time limited operations

### 3.3.1 Background

Noise emissions from the premises are expected to increase as a result of the (time limited) operation of the revitalised processing plant. The increased noise levels could potentially impact nearby sensitive receptors, primarily residential premises in the Kalgoorlie-Boulder township, which is located approximately 2 km west of the processing plant. As such, the applicant may potentially exceed assigned noise levels and be in breach of the *Environmental Protection (Noise) Regulations 1997* (Noise Regulations).

The applicant currently has approval under Regulation 17 of the Noise Regulations to allow the emission of noise from the KCGM operations to vary from standard assigned noise levels. The *Environmental Protection (Fimiston Gold Mine Noise Emissions) Approval 2016* stipulates the approved noise levels for the premises. Requirements of the Regulation 17 approval include the implementation of a noise management plan and continued noise monitoring.

Currently, a 15m-tall earthen noise bund has been constructed between the KCGM operation's mining/pit area and the township to attenuate noise from mining activities (and other sources emitted from east of the township).

### 3.3.2 Risk Assessment

To assess the potential noise impacts from the revitalised processing plant, the applicant undertook an environmental noise assessment (Herring Storer Acoustics 2022). The assessment predicted noise levels at five compliance noise monitoring locations, including the Boulder Primary School (BPS) (Figure 4). Noise levels were calculated under three scenarios, including current mill and crushing only (Scenario 1), current and proposed increased mill and crushing (Scenario 2) and current and proposed mill, crushing and mining operations (Scenario 3) (Table 4). Predicted noise contour plots are shown in Figure 4.

Considering only the proposed revitalisation of the processing plant, a general increase of 3 dB(A) was predicted at all the noise monitoring locations within the township. The overall noise levels from the processing plant were significantly below the assigned noise levels at these locations (Table 4). Scenario 3 indicated noise from the processing plant were at least 10 dB lower than the mining noise levels, the proposed progressing activities would not significantly impact the overall noise levels at the monitoring locations.

To manage noise emissions from the processing plant and the wider KCGM operation, the applicant will continue to implement the noise abatement controls in their Noise and Vibration Management Plan (KCGM 2018). No additional control measures were proposed.

### 3.3.3 Risk rating and decision

In considering the outcomes of the noise assessment, the consequence of this risk event is **minor**, considering that noise emissions from the revitalised process plant is unlikely to be a significant contributor to the overall noise emissions from the wider KCGM operation.

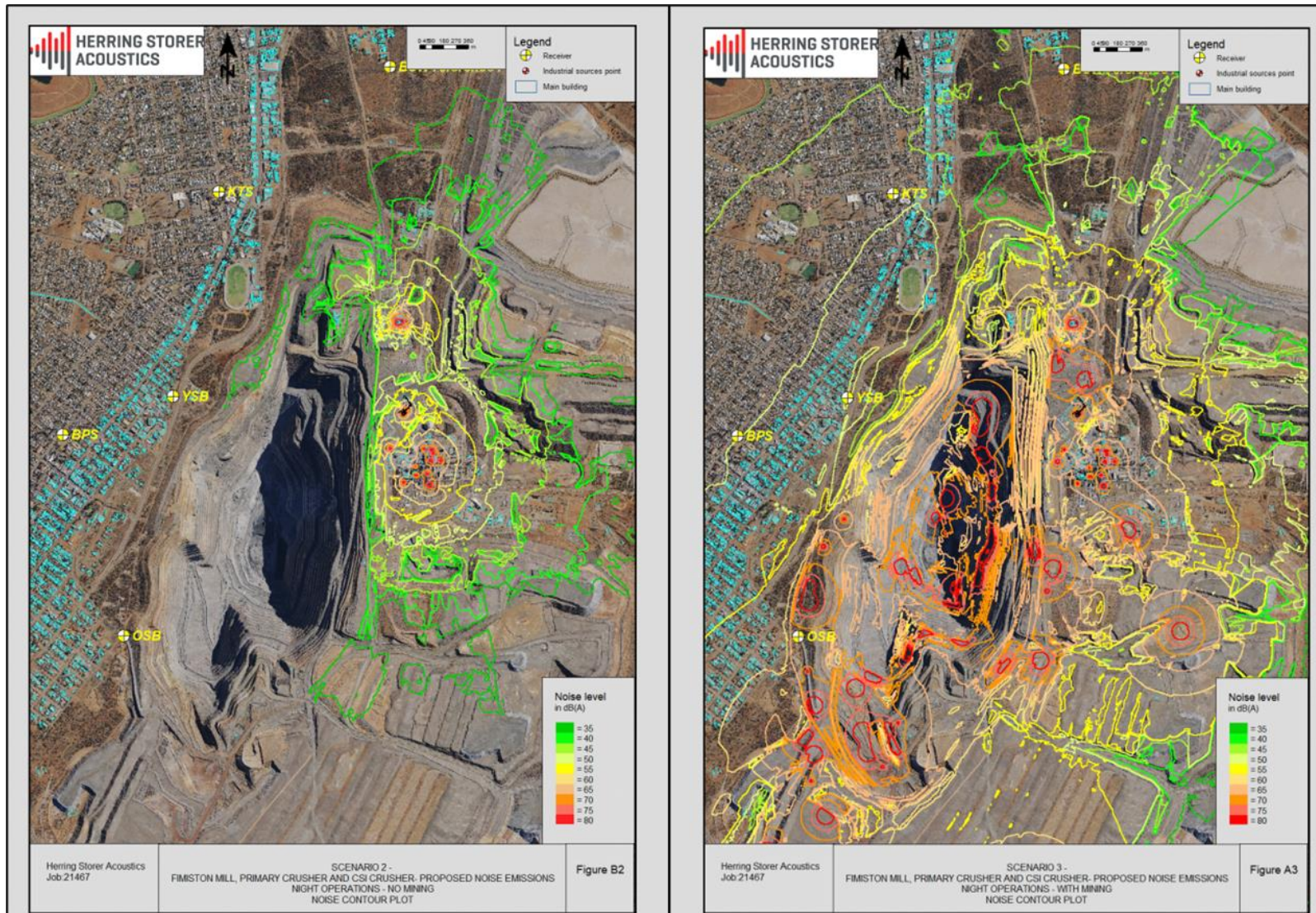
The likelihood of this risk event is **unlikely** and may be dependent on specific timing and meteorological conditions.

The resultant risk rating is **medium**. The applicant's proposed controls are conditioned within the works approval, in accordance with *Guideline: Risk Assessments* (DWER 2020b). Given the controls already in place, the Delegated Officer has decided that no additional operational controls are required to manage noise emissions during time limited operations. Compliance to the *Environmental Protection (Fimiston Gold Mine Noise Emissions) Approval 2016* must still be demonstrated.

**Table 4: Approved and calculated noise levels under three scenarios**

| Monitoring location | Time of Day          | Approved levels (dB) |                    | Scenario 1 | Scenario 2 | Scenario 3 |
|---------------------|----------------------|----------------------|--------------------|------------|------------|------------|
|                     |                      | L <sub>a</sub> 10    | L <sub>A</sub> max |            |            |            |
| BPS                 | Day: 0700 – 1900     | 50 + WIF             | 62 + WIF           | 23.7       | 25.9       | 49.9       |
|                     | Evening: 1900 – 2200 | 45 + WIF             | 52 + WIF           |            |            |            |
|                     | Night: 2200 - 0700   | 45 + WIF             | 52 + WIF           |            |            |            |
| BWS                 | Day: 0700 – 1900     | 50 + WIF             | 65 + WIF           | 29.9       | 32.0       | 45.8       |
|                     | Evening: 1900 – 2200 | 45 + WIF             | 55 + WIF           |            |            |            |
|                     | Night: 2200 - 0700   | 45 + WIF             | 55 + WIF           |            |            |            |
| KTS                 | Day: 0700 – 1900     | 50 + WIF             | 62 + WIF           | 26.5       | 29.5       | 49.0       |
|                     | Evening: 1900 – 2200 | 45 + WIF             | 52 + WIF           |            |            |            |
|                     | Night: 2200 - 0700   | 45 + WIF             | 52 + WIF           |            |            |            |
| OSB                 | Day: 0700 – 1900     | 52 + WIF             | 65 + WIF           | 23.3       | 25.8       | 67.4       |
|                     | Evening: 1900 – 2200 | 49 + WIF             | 60 + WIF           |            |            |            |
|                     | Night: 2200 - 0700   | 49 + WIF             | 60 + WIF           |            |            |            |
| YSB                 | Day: 0700 – 1900     | 52 + WIF             | 65 + WIF           | 22.6       | 22.3       | 48.3       |
|                     | Evening: 1900 – 2200 | 49 + WIF             | 60 + WIF           |            |            |            |
|                     | Night: 2200 - 0700   | 49 + WIF             | 60 + WIF           |            |            |            |

\* WIF = Weather influencing factor.



**Figure 4: Noise contour plots for Scenario 2 and Scenario 3**

## 3.4 Detailed risk assessment for air emissions during time limited operations

### 3.4.1 Background

Point source air emissions from the premises are expected to increase as a result of the (time limited) operation of the revitalised processing plant. There are two point sources of concern: (1) emission stack for additional carbon regeneration kilns constructed as part of the processing plant revitalisation and (2) emission stack for the existing gold room, which may be affected by an increase in throughput authorised by this works approval. Air emissions from these sources could potentially impact nearby sensitive receptors, primarily residential premises within the Kalgoorlie-Boulder township, which is located approximately 2 km west of the processing plant.

The primary contaminant of concern is mercury. Mercury is known to be contained within coloradoite, one of a suite of telluride minerals that are widely distributed through the Golden Mile lodes and represent <0.00014% of the ore mined from the Fimiston Open Pit and Mt Charlotte Underground Mine, which feeds into the Fimiston Processing Plant.

During gold recovery, the majority of the mercury contained in the ore is leached and adheres onto the activated carbon at the CIL circuit, while a smaller proportion is retained in the gold. Subsequently, mercury is removed from the carbon and gold during the carbon regeneration and gold refining process, respectively, in a gaseous form that is released into the atmosphere.

Other contaminants of concern include VOCs and particulate dust.

Ministerial Statement 782 requires the applicant to implement an air quality management plan, which is also be considered in this risk assessment (KCGM 2019).

### 3.4.2 Fimiston Emissions Reduction Project

There is currently an exhaust stack for the existing carbon regeneration kilns (i.e., Kiln 3, 4 and 5) and the gold room at the premises, operating under licence L6420/1988/14. Since 2006, the applicant has undertaken extensive works to progressively upgrade the infrastructure for the purpose of emissions reduction.

The most recent effort at reducing emissions from the premises was the Fimiston Emissions Reduction Project (ERP), which commenced in 2015 (KCGM 2019). The ERP aimed to capture greater than 90% of the atmospheric mercury emissions associated with mineral processing activities at the Fimiston Processing Plant. The works completed included the following:

- The installation of a kiln off-gas cleaning circuit (KOGCC), which comprised an exhaust off-gas scrubber, a regeneration thermal oxidiser (RTO) and a sulfur-impregnated carbon scrubber. The KOGCC intercept and treat off-gas from the carbon regeneration kilns prior to release into the environment through the exhaust stack; and
- The installation of a mercury retort unit in the gold room to extract any mercury contained within the filter cake, prior to smelting. The gaseous mercury is then passed through a wet scrubber unit and mist eliminator to condense the gaseous mercury back into elemental mercury for collection. The off-gas from the mist eliminator is captured by a carbon filter prior to being released through the stack outlet.

In 2020, post-commissioning monitoring indicated that the upgraded infrastructure was successful in meeting the emissions reduction target of the project (KCGM 2020).

### 3.4.3 Risk assessment of carbon regeneration kiln and KOGCC

As part of the Fimiston Processing Plant Revitalisation, the applicant intends to install a duplicate KOGCC for the new carbon regeneration kiln without an RTO unit. Post-commissioning monitoring of the existing KOGCC indicated that the RTO resulted in only a

1.18% and 6.67% reduction in off-gas mercury concentration and emission rates, respectively, which was less effective compared to the wet scrubber and carbon filter (Figure 5a) (KCGM 2020). Further, the applicant experienced issues with the performance of the RTO during commissioning (KCGM 2019). Hence, the RTO was omitted from the duplicate KOGCC design.

Nevertheless, it was also observed that the RTO was the largest contributor for reducing total VOC concentration and emission rates (i.e., 69.5% and 78.6%, respectively) (Figure 5b). Therefore, the omission of the RTO may result in higher VOC emissions from the duplicate kiln stack.

To assess the potential air emissions from the additional carbon regeneration kiln and KOGCC without an RTO, the applicant undertook an air quality assessment (Ramboll 2022). The assessment included air dispersion modelling of mercury and various VOCs (e.g., benzene, vinyl chloride, bromoform, etc) under the following scenarios:

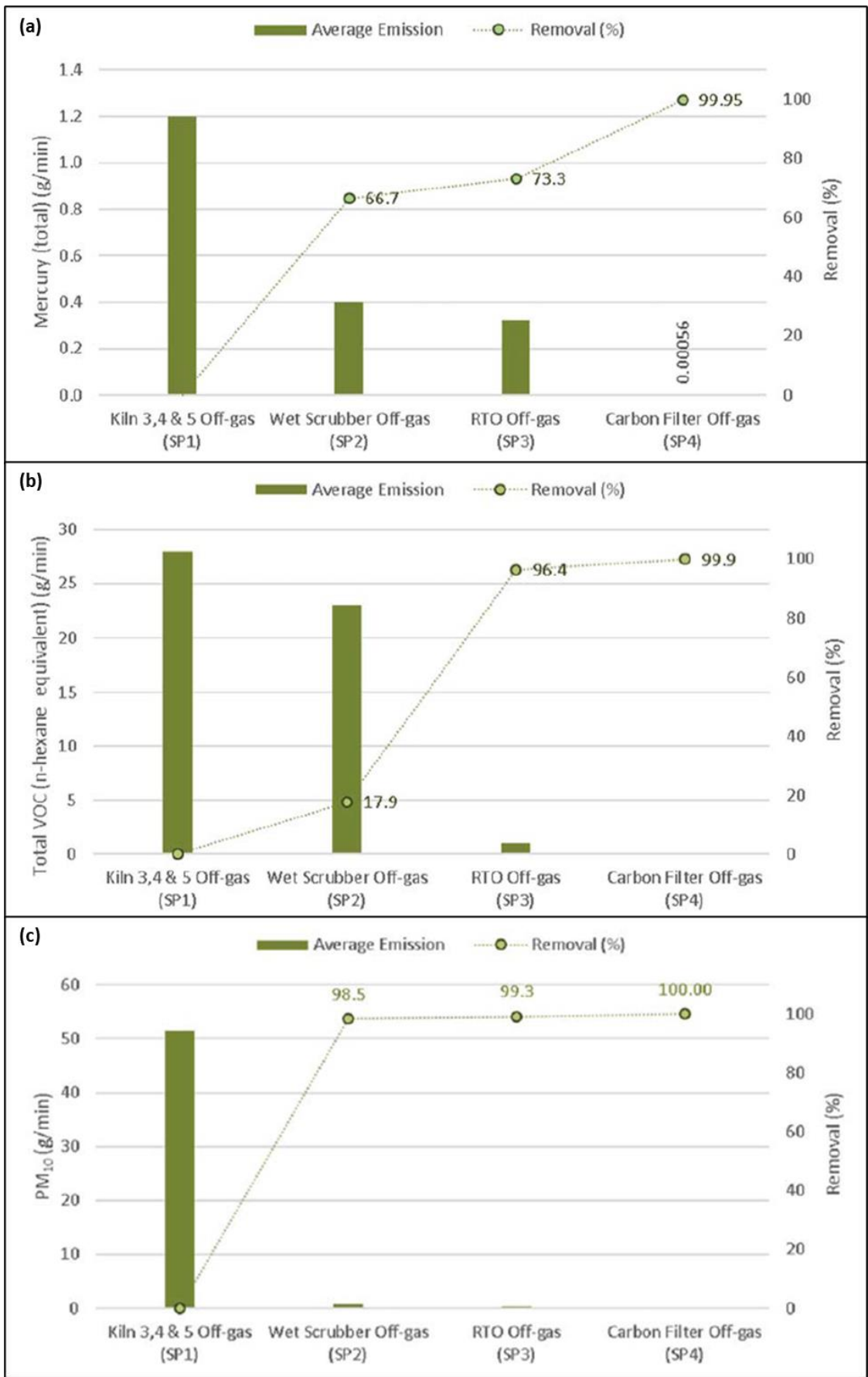
- Scenario 0: Operation of current operations, comprising only the existing kiln and KOGCC;
- Scenario 1: Operation of existing and proposed kilns and KOGCC, both equipped with an RTO;
- Scenario 2: Operation of existing and proposed kilns and KOGCC, but the proposed KOGCC does not have an RTO equipped and with different stack heights (20 m, 25 m and 30 m); and
- Scenario 3: Operation of existing and proposed kilns and KOGCC (i.e. the same as Scenario 2), but the proposed KOGCC does not have an RTO equipped and uses an electric arc kiln instead of a gas-fired kiln.

For comparative purposes, the applicant had adopted guideline values from NSW EPA (2017) and DWER (2019). The guidelines are applicable to offsite sensitive receptor locations, but the applicant had applied it to the entirety of the modelled domain, including within the vicinity of the point source.

Based on the model, ground level concentrations (GLCs) for all contaminants of potential concern were below the ambient air quality criteria at all locations (onsite and offsite) within the modelled domain for all scenarios (Table 5). The highest predicted GLCs occurred at the premises, within the vicinity of the emission stacks (Figure 6).

Due to the exclusion of an RTO in Scenario 2 and 3, predicted benzene GLCs were higher, which agreed with findings from previous empirical data (KOGC 2020). Benzene GLCs decreased with increasing stack height used in Scenario 2. Nevertheless, none of the benzene GLCs exceeded the relevant guideline value, with offsite benzene GLCs only reaching approximately 6% of the short-term guideline value. As such, the increase was not considered to have a significant impact on human health.

Based on the outcomes of the air quality assessment, the applicant intends to construct the duplicate KOGCC in accordance with Scenario 2 (i.e. without an RTO) with a 25m-tall stack. The applicant has committed to undertaken post-commissioning monitoring to validate the model findings. As a contingency, the applicant has also prepared sufficient space to retrofit an RTO should the post-commissioning results not align with the predicted model outputs.



**Figure 5: Mean pollutant mass emission rate and removal efficiency (%) of components of KOGCC for (a) mercury, (b) total VOC and (c) PM<sub>10</sub>**

**Table 5: Predicted ground level concentrations (GLC) of mercury and benzene under various infrastructure scenarios**

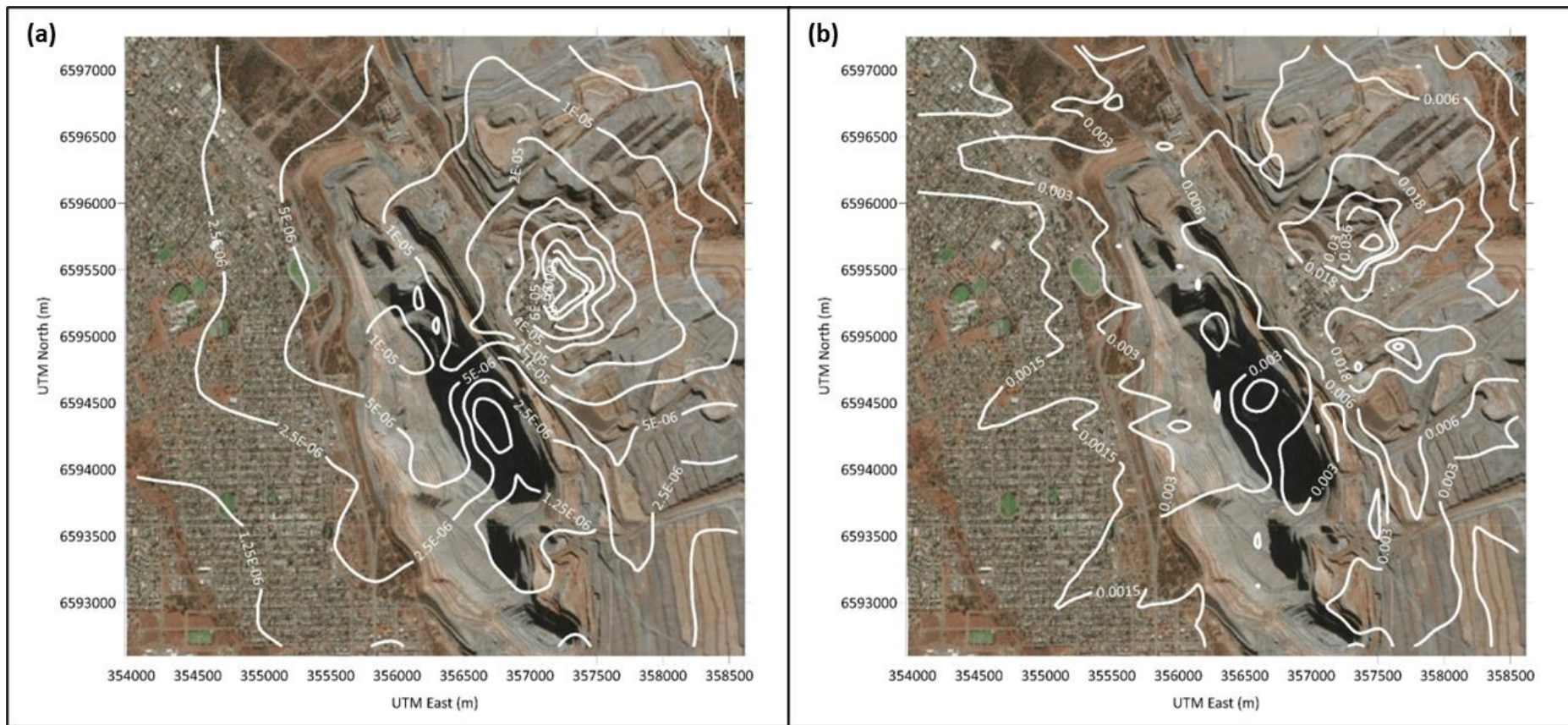
| Contaminant | One-hour average AGV <sup>1</sup> | Maximum predicted ground level concentrations (GLC) in modelled domain (µg/m <sup>3</sup> ) <sup>2</sup> |            |            |           |           |            |
|-------------|-----------------------------------|--|------------|------------|-----------|-----------|------------|
|             |                                   | Scenario 0   | Scenario 1 | Scenario 2 |           |           | Scenario 3 |
|             |                                   |  |            | 20m stack  | 25m stack | 30m stack |            |
| Mercury     | 0.55                              | 0.0056   | 0.0061     | 0.0061     | 0.0061    | 0.0061    | 0.0061     |
| Benzene     | 29                                | 0.05   | 0.04       | 14.28      | 12.39     | 10.29     | 22.2       |
| Contaminant | Annual average AGV <sup>1</sup>   |  |            |            |           |           |            |
| Mercury     | 0.18                              | 0.0001   | 0.0002     | 0.0002     | 0.00      | 0.00      | 0.0002     |
| Benzene     | 9.6                               | 0.0009   | 0.001      | 0.46       | 0.36      | 0.24      | 0.47       |
| Contaminant | One-hour average AGV <sup>1</sup> | Maximum predicted GLCs at offsite sensitive receptors (µg/m <sup>3</sup> ) <sup>2,3</sup>                |            |            |           |           |            |
|             |                                   | Scenario 0   | Scenario 1 | Scenario 2 |           |           | Scenario 3 |
|             |                                   |  |            | 20m stack  | 25m stack | 30m stack |            |
| Mercury     | 0.55                              | 0.00051  | 0.00078    | 0.00078    | 0.00078   | 0.00059   | 0.00079    |
| Benzene     | 29                                | 0.005  | 0.01       | 1.73       | 1.76      | 0.63      | 1.8        |
| Contaminant | Annual average AGV <sup>1</sup>   |  |            |            |           |           |            |
| Mercury     | 0.18                              | 3.26E-06   | 5.62E-06   | 5.62E-06   | 5.51E-06  | 5.38E-06  | 5.65E-06   |
| Benzene     | 9.6                               | 0.00003  | 0.00005    | 0.0139     | 0.01313   | 0.01225   | 0.01409    |

Note 1: AGV means air quality guideline values.

Note 2: GCL exceedances are coloured in red.

Note 3: Location of offsite sensitive receptors was not specified.





**Figure 6: Annual average predicted ground level concentration ( $\mu\text{g}/\text{m}^3$ ) of (a) mercury and (b) benzene under Scenario 2 with 20 m stack height**

### 3.4.4 Risk assessment of gold room furnace stack

No additional controls or modifications were proposed for the gold room as part of this works approval. The applicant indicated that there was sufficient capacity within the existing retort oven. The forecast production is likely to be similar to the historical production rate at the gold room, as it was a function of the lower grade ore processed.

As part of the ERP, the installation of the retort oven, wet scrubber unit, mist eliminator and carbon filter were successful in removing elemental mercury from filter cakes (Table 6) and reducing off-gas mercury emissions released into the environment (Figure 7) (KCGM 2020).

**Table 6: Summary of retort oven mercury monitoring results**

| Elution circuit ID | Sample location         | Mercury concentration in filter cake (mg/kg) | Mercury capture efficiency rate |
|--------------------|-------------------------|--|---------------------------------|
| Run 1              | SP12 (Pre-retort oven)  | 870  | 97.6%                           |
|                    | SP13 (Post-retort oven) | 21   |                                 |
| Run 2              | SP12 (Pre-retort oven)  | 4,820  | 99.7%                           |
|                    | SP13 (Post-retort oven) | 15   |                                 |
| Run 3              | SP12 (Pre-retort oven)  | 1,020  | 96.7%                           |
|                    | SP13 (Post-retort oven) | 33   |                                 |
| <b>Average</b>     |                         |  | <b>98.0%</b>                    |

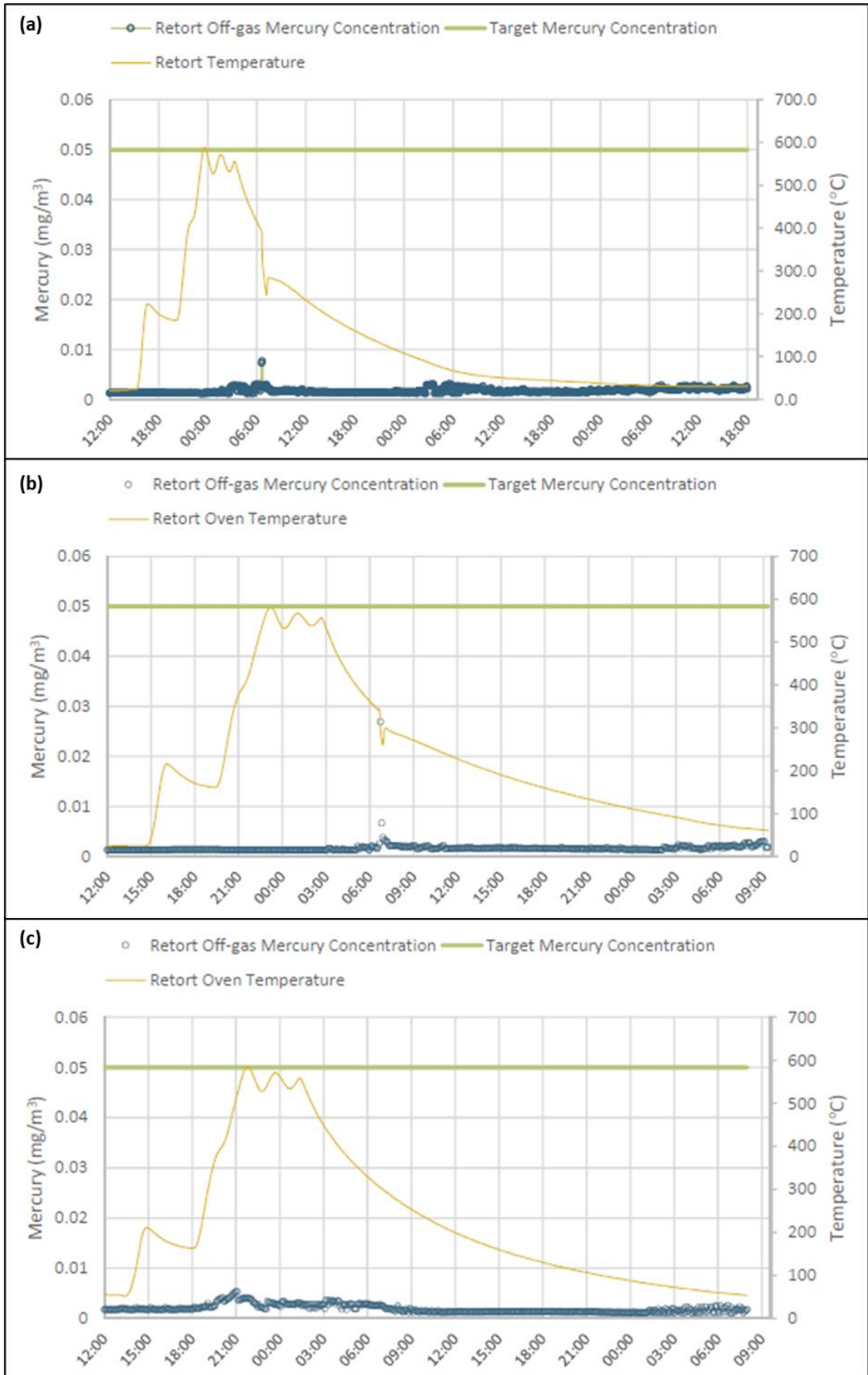
Furthermore, in 2022, the applicant was authorised under licence L6420/1988/14 to upgrade the gold room's scrubber system and stack to improve air emission quality. At the time of this assessment, the upgrade works remained in progress.

### 3.4.1 Decision

Due to the increased throughput authorised by this works approval and the distance between the premises to the Kalgoorlie township, the potential consequence for this risk event would likely be major. However, in considering the existing controls and the outcomes of the air quality assessment, the residual consequence is considered **minor**.

The likelihood of this uncontrolled risk event is **unlikely**. However, uncontrolled stack emissions may still occur due to potential failure/malfunction of the necessary pollution-control infrastructure (e.g. KOGCC).

The resultant risk rating is **medium**. The applicant's proposed controls are conditioned within the works approval, in accordance with the *Guideline: Risk Assessments* (DWER 2020b). Given the controls already in place, the Delegated Officer has decided that no additional operational controls are required to manage air emissions during time limited operations.



**Figure 7: Retort oven off-gas mercury vapour monitoring results for (a) Run 1, (b) Run 2 and (c) Run 3.**

## 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 27 June 2022                                 | No comments received.   | N/A.                 |
| Application advertised in the Kalgoorlie Miner newspaper on 22 June 2022.                          | No comments received.   | N/A.                 |
| City of Kalgoorlie-Boulder advised of proposal on 21 June 2022.                                    | No comments received.   | N/A.                 |
| Department of Mines, Industry Regulation and Safety (DMIRS) advised of proposal on 16 August 2022. | DMIRS responded on 22 August 2022, noting that the Mining Proposal (Registration ID 112843) and that no significant environmental issues associated with the proposed upgrades were identified. | No action taken.     |
| Applicant was provided with draft documents on 21 September 2022.                                  | The applicant responded on 3 October 2022 with comments.<br>Refer to Appendix 1.  | 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) 2019, *Draft Guideline: Air emissions*, Perth, Western Australia.
3. DWER 2020a, *Guideline: Environmental Siting*, Perth, Western Australia.
4. DWER 2020b, *Guideline: Risk Assessments*, Perth, Western Australia.
5. Herring Storer Acoustics 2022, *Kalgoorlie Consolidated Gold Mines Fimiston Mill Project – Environmental Noise Assessment*, Como, Western Australia. TRIM: DWERDT593041.
6. Kalgoorlie Consolidated Gold Mines Pty Ltd (KCGM) 2018, *Noise and Vibration Monitoring and Management Plan*, Western Australia. TRIM: DWERDT593036.
7. KCGM 2019, *Fimiston Air Quality Management Plan*, Western Australia. TRIM: DWERDT593038.
8. KCGM 2020, *Fimiston Emissions Reduction Project – Commissioning Report October 2020*, Western Australia. TRIM: DWERDT351598.
9. New South Wales Environment Protection Authority (NSW EPA) 2017, *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales*, Sydney, New South Wales.
10. Ramboll 2022, *Fimiston Processing Plant Air Quality Assessment*, Perth, Western Australia. TRIM: DWERDT593043.

## Appendix 1: Summary of applicant's comments on risk assessment and draft conditions

| Condition                     | Summary of applicant's comment  | Department's response   |
|-------------------------------|---|---|
| Condition 1                   | As requested by the department, the applicant provided name/ID of the proposed carbon regeneration kiln (FN22-KN-411), stack emission point (A3) and catchment pond (Raw water dam #4), as well as updated figures. | The department is satisfied with the information provided and has updated the relevant conditions to reflect the additional information provided.   |
| Condition 10                  | As requested by the department, the applicant provided name/ID of the emission point reference and source for the proposed carbon regeneration kiln.  |   |
| Condition 16                  |   |   |
| Schedule 1: Maps              | As requested by the department, the applicant provided updated Figures 2 and 3, depicting the location of infrastructure listed in Table 1.   |   |
| Schedule 2: Premises boundary | Applicant noted that the coordinates of the premises boundary listed appeared erroneous and have provided the correct coordinates.  | The department is satisfied with the coordinates provided. Coordinates were converted from GDA 94 to GDA 2020, as required by the National Measurement (Recognized-Value Standard of Measurement of Position) Determination 2017. |

## Appendix 2: Application validation summary

| SECTION 1: APPLICATION SUMMARY                              |  |  |   |                               |
|---|--|--|---|-------------------------------|
| <b>Application type</b>                                     |  |  |   |                               |
| Works approval  | <input checked="" 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 type="checkbox"/>   | Current works approval number:   |   |                               |
| 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                                   | 20 April 2022  |  |   |                               |
| <b>Applicant and Premises details</b>                       |  |  |   |                               |
| Applicant name/s (full legal name/s)                        | Kalgoorlie Consolidated Gold Mines Pty Ltd   |  |   |                               |
| Premises name   | Fimiston Processing Plant and TSFs   |  |   |                               |
| Premises location   | Tenements M26/383, M26/294, M26/359  |  |   |                               |
| Local Government Authority                                  | City of Kalgoorlie-Boulder   |  |   |                               |
| <b>Application documents</b>                                |  |  |   |                               |
| HPCM file reference number:                                 | DER2022/000170   |  |   |                               |
| Key application documents (additional to application form): | <ul style="list-style-type: none"> <li>• Cover letter</li> <li>• Preliminary commissioning plan</li> <li>• Stakeholder consultation plan</li> <li>• Air quality assessment</li> <li>• Environmental noise assessment</li> <li>• Fimiston air quality management plan</li> <li>• Noise and vibration monitoring and management plan</li> <li>• Figures (premises boundary and site layout)</li> </ul> |  |   |                               |
| <b>Scope of application/assessment</b>                      |  |  |   |                               |

|  |   |
|--|---|
| <p>Summary of proposed activities or changes to existing operations.</p> | <p>Kalgoorlie Consolidated Gold Mines Pty Ltd is seeking a Works Approval to allow a revitalisation of the Fimiston Processing Plant. The revitalisation will increase nominal throughput of 'Category 5 - Processing and Beneficiation of Metallic or Non-Metallic Ore' from 14.5 million tonnes per annum (mtpa) to 23.5 mtpa.</p> <p>The project includes modernising the following major circuits of the plant:</p> <ul style="list-style-type: none"> <li>• Addition of a new primary crusher and covered coarse ore stockpile;</li> <li>• Additional milling capacity with a 18MW SAG Mill and 22MW Ball Mill;</li> <li>• Additional Rougher Flotation Cells and re-purposing of existing flotation circuits;</li> <li>• Addition of a 60m Pre-Leach Thickener for Flotation Tails;</li> <li>• New flotation tails CIL circuit, with dedicated elution and carbon regeneration circuit; and</li> <li>• Potential to replace the Gidji flowsheet at Fimiston, repurposing some of the existing CIL circuits.</li> </ul> <p>The following existing components will be made redundant with the Processing Plant upgrade:</p> <ul style="list-style-type: none"> <li>• Existing ball mill gravity circuits;</li> <li>• Existing trash screens;</li> <li>• Existing flotation cells;</li> <li>• Existing 27 m diameter pre-leach thickener;</li> <li>• Existing contract crushing circuit; and</li> <li>• Existing Mt Charlotte comminution circuit.</li> </ul> <p>There is no change to the existing Processing Plant precinct.</p> |
|--|---|

**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  |
|---|--|--|
| Category 5: Processing or beneficiation of metallic or non metallic ore | 14,500,000 tonnes per annual period    | <p><b>Design capacity</b> – 28,000,000 tonnes per annual period</p> <p><b>Production capacity</b> – 23,500,000 tonnes per annual period.</p> |

**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"/> | N/A   |
| Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?   | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | <p><b>Ministerial statement No:</b> 782</p> <p><b>EPA Report No:</b> 1273</p> |
| Has the proposal been referred and/or assessed under the EPBC Act?   | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | N/A   |



|   |  |  |
|---|--|--|
| Has the applicant demonstrated occupancy (proof of occupier status)?  | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>                              | Mining lease / tenement <input checked="" type="checkbox"/><br><b>Mining tenements:</b><br>M26/294 (Expiry: 25 October 2031)<br>M26/359 (Expiry: 14 June 2035)<br>M26/383 (Expiry: 16 July 2034)   |
| Has the applicant obtained all relevant planning approvals?   | Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/> | Premises is located on mining tenement and regulated under the <i>Mining Act 1978</i> .  |
| Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?         | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>                              | No clearing is proposed.   |
| 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"/>                              | No clearing is proposed.   |
| 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"/>                              | <b>Licence/permit No:</b><br><ul style="list-style-type: none"> <li>• GWL66252</li> <li>• GWL63555</li> <li>• GWL201828</li> <li>• GWL64266</li> <li>• GWL201827</li> <li>• GWL159860</li> <li>• GWL68592</li> <li>• GWL63554</li> </ul>           |
| Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>                              | <b>Name:</b> Goldfields Groundwater Area<br><b>Type:</b> Proclaimed Groundwater Area<br><b>Has Regulatory Services (Water) been consulted?</b><br>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/> |
| Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?  | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>                              | N/A  |
| Is the Premises subject to any other Acts or subsidiary regulations   | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>                              | <ul style="list-style-type: none"> <li>• Mining Act 1978</li> <li>• Rights in Water and Irrigation Act 1914</li> </ul>   |
| 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 checked="" type="checkbox"/> No <input type="checkbox"/> | <b>Classification:</b> Possibly contaminated – investigation required (PC-IR)<br><b>Date of classification:</b> 13 September 2010 |