



## Application for Licence Amendment

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

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<b>Licence Number</b>	L9362/2022/1
<b>Licence Holder</b>	Norton Gold Fields Pty Limited
<b>ACN</b>	112 287 797
<b>File Number</b>	DER2022/000510
<b>Premises</b>	Binduli Operations  Legal description –  Part of mining tenements M26/115, M26/243, M26/387, M26/420, M26/430, M26/445, M26/446, M26/447, M26/474, M26/629 and M26/833.  BINDULI WA 6430  As defined by the premises map in Schedule 1 and the coordinates outlined in Schedule 2.
<b>Date of Report</b>	27 September 2024
<b>Decision</b>	Revised licence granted

**A/MANAGER, RESOURCE INDUSTRIES  
INDUSTRY REGULATION (STATEWIDE DELIVERY)**

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 Amendment summary	1
<b>3. Risk assessment</b>	<b>2</b>
3.1 Source-pathways and receptors	2
3.1.1 Emissions and controls	2
3.1.2 Receptors	4
3.2 Risk ratings	2
<b>4. Consultation</b>	<b>6</b>
<b>5. Conclusion</b>	<b>6</b>
5.1 Summary of amendments	6
<b>References</b>	<b>8</b>

## 1. Decision summary

Licence L9362/2022/1 is held by Norton Gold Fields Pty Limited (Licence Holder) for the Binduli Operations (the Premises), located within tenements M26/115, M26/243, M26/387, M26/420, M26/430, M26/445, M26/446, M26/447, M26/474, M26/629 and M26/833 in Binduli WA.

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 operation of the Premises. As a result of this assessment, Revised Licence L9362/2022/1 has been granted.

## 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 Amendment summary

On 4 June 2024, the Licence Holder submitted an application to the department to amend Licence L9362/2022/1 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The following amendments are being sought:

- The Licence Holder seeks to discharge dewater from Janet Ivy pit to the Fort William pit; and
- The Licence Holder seeks to include the operation of a crushing and screening plant (category 12) onto the licence.

This amendment is limited only to changes to Category 6 and the addition of Category 12 to the Existing Licence. No changes to the aspects of the existing Licence relating to Category 5, 7 and 52 have been requested by the Licence Holder.

The Licence Holder has requested the inclusion of a dewater pipeline between the Janet Ivy pit and the Fort William pit to allow the transport of mine dewater from Janet Ivy pit to Fort William pit. This pipeline was constructed under works approval W6504/2021/1. Assessment of the constructed works was deemed compliant by DWER on 2/08/2024. Fort William Pit is already an approved discharge point on the licence for Brine Water that is a waste stream from the Water Treatment Plant at the premises.

The Licence Holder has requested to add category 12 onto licence L9362/2022/1. Works to install the crushing and screening equipment (and associated infrastructure) was completed under works approval W6730/2022/1. Assessment of the constructed works was deemed compliant by DWER on 30/05/2024. Material is to be crushed and used to construct future stages of the heap leach facility (approved under a separate works approval W6504/2021/1) present on the premises. Construction is expected to span over many years. Waste rock may also be screened from time to time for use in road repairs and other maintenance activities. Table 1 below outlines the proposed changes to the existing Licence.

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

Category	Current throughput capacity	Proposed throughput capacity	Description of proposed amendment
6	1,500,000 tonnes per annual period	1,500,000 tonnes per annual period	Include a dewatering pipeline between the Janet Ivy pit and the Fort William pit.
12	N/A	800,000 tonnes per annual period	Inclusion of category 12 onto licence.

### 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 operation which have been considered in this Amendment Report are detailed in Table 2 below. Table 2 also details the proposed control measures the Licence Holder has proposed to assist in controlling these emissions, where necessary.

**Table 2: Licence Holder controls**

Emission	Sources	Potential pathways	Proposed controls
Mine dewater	Mine dewater pipelines	Direct discharge to land: Pipeline rupture / leaks	<p>The mine dewater pipeline between the Janet Ivy pit and the Fort William pit is to have the following controls:</p> <ul style="list-style-type: none"> <li>• Located within dedicated secondary containment infrastructure designed to contain any spill for a period equal to the time between routine inspections;</li> <li>• Flow metres operational to monitor total discharges of the pipeline; and</li> <li>• Twice daily inspections of the pipeline route.</li> </ul>
	Discharge pit	Direct discharge to land: Overtopping of pit	<ul style="list-style-type: none"> <li>• Condition 1 of existing licence requires a freeboard of 6 m from below the pit crest to be maintained for Fort William pit; and</li> <li>• Flow meter installed to monitor volume of water discharged to the pit.</li> </ul>

Emission	Sources	Potential pathways	Proposed controls
		Seepage from pit walls and floor	None proposed
Noise	Crushing and screening of material, vehicle movements.	Air / windborne pathway	<ul style="list-style-type: none"> <li>• Crushing and screening will only occur between the hours of 7am and 7pm;</li> <li>• All mobile equipment will be maintained, with efficient mufflers and noise shielding;</li> <li>• The location of the crushing and screening area has been designed to take advantage of the existing waste rock dump (WRD), which will provide a noise buffer for the nearest residence;</li> <li>• Stockpiles of crushed and screened product will be positioned to provide noise suppression buffer to the nearest dwellings wherever practicable;</li> <li>• All mobile equipment will be maintained, with efficient mufflers and noise shielding;</li> <li>• Any complaints received regarding noise disturbance will be recorded and investigated immediately; and</li> <li>• All operations will be carried out to comply with the assigned levels within the <i>Environmental Protection (Noise) Regulations 1997</i>.</li> </ul>
Dust	Crushing of material, vehicle movements, lift-off from stockpiles and/or stored product.	Air / windborne pathway	<ul style="list-style-type: none"> <li>• Waste rock is heavily wetted by water cart prior to excavation and crushing;</li> <li>• Daily dust observations recorded;</li> <li>• Water sprays/carts will be utilised in the event high levels of dust are observed;</li> <li>• Crushing equipment has in-built water sprays, and supplemented with external sprays where necessary;</li> <li>• Material drop heights between loaders, trucks and stockpiles is kept to the minimum practical height;</li> <li>• Complaints will be immediately investigated;</li> <li>• Water carts are used onsite to ensure dust around stockpiles and roads areas are adequately controlled; and</li> <li>• The mobile plant is positioned such that the waste rock dump provides shielding of operations from wind.</li> </ul>

Emission	Sources	Potential pathways	Proposed controls
Sediment-laden stormwater	Crushing and screening of material, waste rock stockpiles.	Overland runoff	<ul style="list-style-type: none"> <li>Plant infrastructure will operate on hardstand areas;</li> <li>Bundling is created from crushed material around the operation area to prevent the escape of stormwater;</li> <li>Crushing areas are located on previously disturbed areas where there are pre-existing toe or v drains to capture stormwater runoff; and</li> <li>Where crushed material stockpiles cannot be carted directly to the heap leach it will be stockpiled on the historic ROM pad.</li> </ul>
Spills or hydrocarbon leaks	Operation of vehicles and mobile equipment. Leaks from damaged equipment and refueling.	Overland runoff and infiltration to soil and groundwater	<ul style="list-style-type: none"> <li>Will be managed according to site management plans.</li> <li>No specific controls proposed.</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 Licence 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 and environmental receptors and distance from prescribed activity**

Human receptors	Distance from prescribed activity
Residential Premises	Human receptors are shown below in Figure 1. The closest receptors are approximately 1.8 km from the location of the crushing and screening area.
Environmental receptors	Distance from prescribed activity
Native Vegetation (Mixed Eucalyptus woodlands)	Native vegetation appears both within and surrounds the prescribed premises (adjacent to some sections of pipeline and approximately 280 m east of Fort Williams).
Groundwater	<p>Premises is located in RIWI Goldfields Groundwater Area.</p> <p>Standing Water Level Currently between 7.67 mbgl (August 2023 in MBH08) to 28.68 mbgl (February</p>

	<p>2023 in MBH05) (Norton 2024).</p> <p>Groundwater appears to flows to the North using data from the 2022 groundwater monitoring events.</p> <p>pH Currently between 3.21 (August 2023 in MBH04) to 7.58 (February 2023 in MBH08) (Norton 2024).</p> <p>Total dissolved solids (TDS) Currently between 64,800 mg/L (February 2023 in MBH05) to 158,000 mg/L (August 2023 in MBH01).</p> <p>The only known groundwater users within 5 kms of the Premises are for mining processing purposes only. There are no other known groundwater users in the local area of the Premises (5 km radius).</p>
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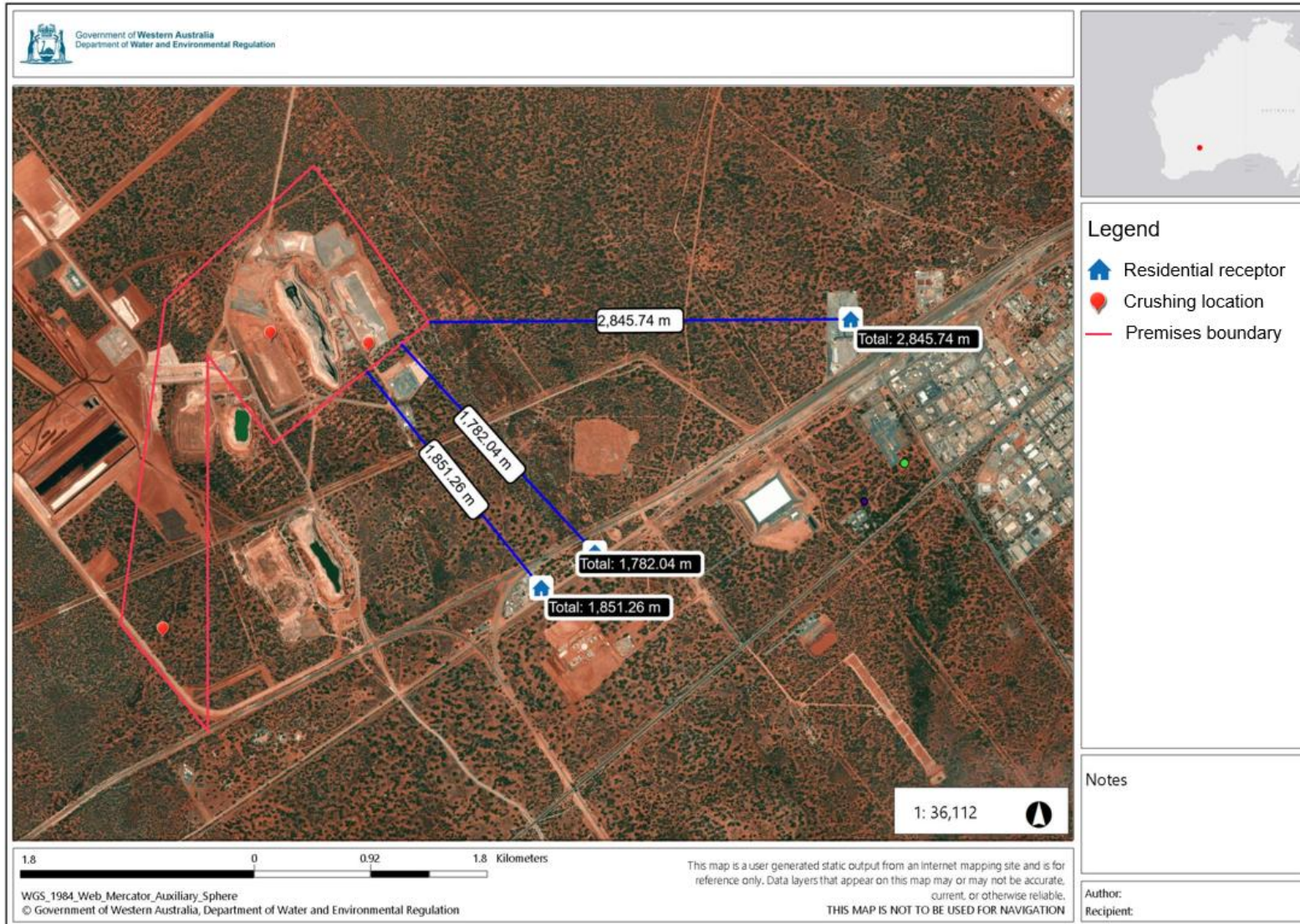


Figure 1: Distance to sensitive receptors



## 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 Licence 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 Licence Holder's proposed controls to be critical to maintaining an acceptable level of risk, these will be incorporated into the licence as regulatory controls.

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

The Revised Licence L9362/2022/1 that accompanies this Amendment Report authorises emissions associated with the operation of the Premises i.e. mine dewater activities and crushing and screening activities.

The conditions in the Revised Licence have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

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

Risk Event					Risk rating <sup>1</sup> C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions <sup>2</sup> of licence	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls				
<b>Operation</b>								
Screening, crushing, unloading, loading and storage of material  Vehicle movements	Dust	Air/windborne pathway causing impacts to health and amenity	Residences within 2 km of the premises boundary  Surrounding vegetation	Refer to Section 3.1	C = Moderate L = Unlikely <b>Medium Risk</b>	Y	Condition 1 (item 10) and condition 3	The licence holder's proposed controls to manage dust have been conditioned within the licence.  The general provisions of the EP Act also apply.
	Noise		Residences within 2 km of the premises boundary	Refer to Section 3.1	C = Moderate L = Unlikely <b>Medium Risk</b>	Y	N/A	Due to the location of the crushing and screening plant (WRD provide a noise buffer) and the distance to the nearest receptor, noise emissions are not expected to exceed to assigned levels outline in the <i>Environmental Protection (Noise) Regulations 1997</i> at the nearest receptor.  The general provisions of the EP Act and the <i>Environmental Protection (Noise) Regulations 1997</i> apply.
	Sediment laden stormwater	Overland runoff potentially causing ecosystem disturbance or impacting surface water quality	Localised vegetation	Refer to Section 3.1	C = Minor L = Unlikely <b>Medium Risk</b>	Y	Condition 1 (item 7)	Existing condition 1 (item 7) is sufficient to manage this risk event.  The general provisions of the EP Act and the <i>Environmental Protection (Unauthorised discharge) Regulations 2004</i> also apply.
	Spills or hydrocarbon leaks				C = Minor L = Unlikely <b>Medium Risk</b>	Y		

Risk Event					Risk rating <sup>1</sup>	Licence Holder's controls sufficient?	Conditions <sup>2</sup> of licence	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls	C = consequence L = likelihood			
Discharge of Mine dewater from Janet Ivy pit to the Fort William pit	Hyper-saline water	Direct discharge to land and from pipeline rupture potentially causing ecosystem disturbance and impacting on localised vegetation	Localised native vegetation	Refer to Section 3.1	C = Minor L = Unlikely <b>Medium Risk</b>	Y	Condition 2 – pipeline requirements Condition 3 – Pipeline inspection requirement	Existing conditions 2 and 3 (pipeline requirements and inspections) apply to the new pipeline between Janet Ivy and Fort William pit and are sufficient in managing risk of impacts from pipeline leaks and spills.  The general provisions of the EP Act also apply.
		Direct discharge to land from overtopping of Pit potentially causing ecosystem disturbance and impacting on localised vegetation	Localised native vegetation	Refer to Section 3.1	C = Minor L = Unlikely <b>Medium Risk</b>	Y	Condition 1 – Pit freeboard requirements Condition 3 – Freeboard inspection requirement Condition 4 – authorised discharge points Condition 5 – Emissions and discharge monitoring	Storage capacity of Fort William Pit (excluding freeboard) is approximately 2,784,764 m <sup>3</sup> .  It is anticipated that approximately 3,850,000 m <sup>3</sup> of water from Janet Ivy pit will be discharged to Fort William Pit over a period of 6 years.  Fort William pit is already an authorised discharge point for Brine from the water treatment plant at the premises. Conditions on the licence exist for the requirement of a 6m freeboard on Fort William pit to be maintained and the volume of discharge to the pit to be recorded. These conditions will be updated to include this new discharge source.  No additional regulatory controls are required to manage this risk
		Seepage of mine dewater through Fort William base and walls resulting in groundwater mounding	Localised native vegetation Groundwater	Refer to Section 3.1	C = Minor L = Unlikely <b>Medium Risk</b>	Y	Condition 1 – Pit freeboard requirements Condition 3 –	Janet Ivy pit and Fort William pit are located adjacent to each other and are therefore likely to occur within the same aquifer. Movement of water between the two pits is unlikely to

Risk Event					Risk rating <sup>1</sup> C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions <sup>2</sup> of licence	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls				
		/ water quality changes					<p>Freeboard inspection requirement</p> <p>Condition 4 – authorised discharge points</p> <p>Condition 5 – Emissions and discharge monitoring</p>	<p>have a significant impact on groundwater quality. The addition of water from Janet Ivy pit will also help dilute the brine water that is already authorised to be discharged into Fort William pit.</p> <p>The only known groundwater users within 5 kms of the Premises are for mining processing purposes only. There are no other known groundwater users in the local area of the Premises (5 km radius).</p> <p>The licence holder is required to maintain a 6-meter freeboard within Fort William pit as per existing condition 1. This will ensure any potential groundwater mounding does not impact the root zones of native vegetation located close to the discharge pit.</p> <p>Condition 5 also requires the licence holder to monitor the volume of water discharge to fort William pit. This will be updated to include the volume of water discharge from Janet Ivy Pit.</p>

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

Note 2: Proposed Licence 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
Licence Holder was provided with draft amendment on 18/09/2024.	The Licence Holder replied on 20/09/2024 with the requested additional information and waived the remaining consultation period.	Additional information added to the Decision Report.

## 5. Conclusion

Based on the assessment in this Amendment Report, the Delegated Officer has determined that a Revised Licence 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 Licence as part of the amendment process.

**Table 6: Summary of licence amendments**

Condition no.	Proposed amendments
Front page	Change date of amendment. Include category 12 to prescribed activity table.
Licence History	Update latest amendment details.
Condition 1 Table 1	Include Crushing and Screening plant to "Infrastructure and equipment requirements" table. Replace wording "Pit Water" with "Mine dewatering". Include Janet Ivy pit to Fort William pit discharge to operational requirements.
Condition 3 Table 2	Include visual assessment requirement for the crushing and screening operation in the "Inspection of infrastructure" table.
Condition 4 Table 3	Include Janet Ivy pit to Fort William pit discharge as an authorised discharge point. Require the Licence Holder to monitor and record brine water and mine dewater discharged into Fort William pit separately.
Condition 5 Table 4	Include the requirement to monitor the flow of all discharges into the Fort William pit, including the new Janet Ivy pit discharge.
Schedule 1: Maps Premises map	Replace Figure 1 with an updated map showing the location of the crushing and screening area and the Janet Ivy pit to Fort William pit discharge pipeline.
Schedule 1:	Replace Figure 2 with an updated map showing the location of the crushing and

<p>Maps Premises layout map</p>	<p>screening area.</p>
<p>Schedule 1: Maps Discharge point and pipeline infrastructure locations map</p>	<p>Replace Figure 3 with an updated map showing the location of all dewater pipelines and discharge points on site, including the Janet Ivy pit to Fort William pit discharge pipeline.</p>

## 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. Norton Gold Fields 2024, *Annual Environmental Report, L8327, L8512, L8692 & L9362, Reporting Period: 1 January – 31 December 2023*, Kalgoorlie, Western Australia.