



## Application for Licence Amendment

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

<b>Licence Number</b>	L4496/1988/11
<b>Licence Holder</b>	Big Bell Gold Operations Pty Ltd
<b>ACN</b>	090 642 809
<b>File Number</b>	2010/003418-1
<b>Premises</b>	Bluebird Gold Mine MEEKATHARRA WA 6642  Legal description - G51/9, L20/75, L51/18, L51/51, L51/78, M20/12, M20/45, M20/68, M20/70, M20/71, M20/73, M20/77, M20/107, M20/214, M20/219, M20/249, M20/421, M51/6, M51/12, M51/31, M51/33, M51/35, M51/39, M51/62, M51/75, M51/92, M51/96, M51/132, M51/190, M51/199, M51/200, M51/203, M51/209, M51/211, M51/233, M51/236, M51/237, M51/254, M51/320, M51/321, M51/374, M51/393, M51/437, M51/438, M51/439, M51/440, M51/459, M51/462, M51/463, M51/483, M51/485, M51/486, M51/492, M51/493, M51/494, M51/504, M51/523, M51/539, M51/564, M51/569, M51/572, M51/575, M51/581, M51/491, M51/495, M51/666, M51/668, M51/669, M51/670, M51/671, MW51/672, M51/757, M51/788, M51/784, M51/793, M51/794, M51/795, M51/800, M51/801, M51/819, M51/820, M51/824, M51/834, M51/53 and M51/524  As defined in Schedule 1
<b>Date of Report</b>	23 December 2022
<b>Decision</b>	Revised licence granted

#### **A/SENIOR MANAGER, RESOURCE INDUSTRIES**

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

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# 1. Decision summary

Licence L4496/1988/11 (the Licence) is held by Big Bell Gold Operations Pty Ltd (Licence Holder) for the Bluebird Gold Mine (the Premises).

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 Licence L4496/1988/11 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 Application summary

On 7 September 2022, the Licence Holder submitted an application to the department to amend Licence L4496/1988/11 (Licence) under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The following amendments are being sought:

- Include Category 52 (Electric power generation) to account for the existing electric power generating facilities at the Premises.

When the Licence was amended on 28 July 2020, two additional mining locations (Paddy's Flat and Reedy) were included as part of the Bluebird Gold Mine Prescribed Premises boundary. These two additional satellite mining locations each had existing stand-alone electric power generating facilities however these were not considered at the time of assessment. The department has now become aware that the combined total design capacity of all electric power generating at the Premises exceeds the 10 MW threshold for when a Category 52 licence is required (using diesel fuel). The total combined design capacity of all electric power generating at the Premises is 21 MW (using diesel fuel) which consists of the following:

- Bluebird Processing Facility: Eight self-bunded 1250kVA gensets installed on a concrete hardstand area. Total design capacity of 9MW and an average load of 5.5MW.
- Bluebird Underground: Two self-bunded 1250kVA gensets and one 800kVa genset installed on a compacted hardstand area. Total design capacity of 3MW and an average load of 1.4MW.
- Paddy's Flat: Five self-bunded 1250kVA gensets installed on a compacted hard stand area. Total design capacity of 6MW and an average load of 3MW.
- Three self-bunded 1250kVA gensets installed on a compacted hardstand area. Total design capacity of 3MW and an average load of 450kW.

Each existing power station is located adjacent to a fuel storage facility which consists of above-ground diesel storage tanks. All hydrocarbons and chemicals are stored inside secondary containment (i.e. low permeability bund) that is designed to contain no less than 110 % of the volume of the largest storage vessel, or at least 25 % of the total volume of all substances stored in the compound. The bunding is designed such that jetting from any storage vessel is contained within the compound.

- Construct and operate a Hybrid Power Generation Facility at the Bluebird Gold Mine (Figure 1). This facility will eventually replace the Bluebird and Paddy's Flat Power Stations which will be decommissioned.

The Hybrid Power Project consists of the installation of a power station, a photovoltaic solar array, liquefied natural gas (LNG) storage and powerlines.

The proposed Hybrid Power Project consists of the following:

- Nine (9) Caterpillar 3512 Gas Powered Generators and two (2) Cummins Dual Fuel KTA50 Continuous Dual Fuel Generators for a combined output of 15.2 MW.
- 13.1 megawatt (MW) photovoltaic solar array
- 5 MW battery storage system
- Two (2) 370,000L LNG storage vessels

The design capacity for the gas fired generators at the proposed Hybrid Power Project is greater than 10 MW for when a Category 84 is required.

The photovoltaic solar array and battery storage system are activities not prescribed in the Environmental Protection Regulations 1987. Therefore, the department has not considered and assessed these activities as part of this Licence amendment assessment.

This amendment is limited only to include new Categories 52 and 84 to the existing Licence. No changes to the aspects of the existing Licence relating to Category 5, 6, 54, 63 and 64 have been requested by the Licence Holder.

Table 1 below outlines the proposed changes to the existing Licence.

**Table 1: Proposed design capacity changes**

Category	Current design capacity	Proposed design capacity	Description of proposed amendment
52	21 MW in aggregate	No change	New category to regulate existing electrical power generating infrastructure.
84	N/A	15.2 MW in aggregate	New category for the construction and operation of electrical power generating infrastructure.



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 Licence Holder has proposed to assist in controlling these emissions, where necessary.

**Table 2: Licence Holder controls**

Emission	Sources	Potential pathways	Proposed controls
Dust	Construction of the Hybrid Power Generation Facility including earth works and vehicle movements	Air/windborne pathway causing impacts to health and amenity	Use of water carts during construction to wet down exposed areas during earth works.  Roads are routinely wet down as part of the management of dust at the Premises.
Gaseous and particulate emissions (NO <sub>x</sub> , SO <sub>x</sub> , CO and PM <sub>10</sub> )	Burning of diesel at the existing Paddy's Flat Power Station to generate up to 6 MW of electricity	Air/windborne pathway causing impacts to health and amenity	Existing generators will be operated and maintained in accordance with manufacturer specifications.  Licence Holder plans to decommission the Paddy's Flat Power Station in September 2023 following the commissioning of the Hybrid Power Station.
Noise	Operating diesel-powered electrical generators at the existing Paddy's Flat Power Station	Air/windborne pathway causing impacts to health and amenity	

#### 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
Closest residential homestead within the Town of Meekatharra	Approximately 800 m from the existing Paddy’s Flat 6 MW diesel power station. <b>Note this existing power station will be decommissioned when the Hybrid Power Project is operational (expected September 2023).</b>
Great Northern Hwy	Approximately 150 m east of the proposed Hybrid Power Generating Facility.
Environmental receptors	Distance from prescribed activity
None identified	N/A

## 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 4.

The Revised Licence L4496/1988/11 that accompanies this Amendment Report authorises emissions associated with the operation of the Premises i.e. Category 52 and 84 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>Construction</b>								
Construction of the Hybrid Power Generation Facility including earth works and vehicle movements	Dust	Air/windborne pathway causing impacts to amenity and visual impacts to road users	Great Northern Hwy	Refer to Section 3.1.1	C = Slight L = Unlikely <b>Low Risk</b>	Y	Conditions <b>1.1.10</b> , 1.1.11, 1.1.12, 1.1.13, 4.1.1, 4.1.3 and 4.2.1	New condition to include standard construction conditions, including applicant controls, and the installation of infrastructure to be generally located as identified in the submitted application.  Existing compliance and reporting conditions apply for the construction of new infrastructure.
<b>Operation</b>								
Burning of diesel at the existing Paddy's Flat Power Station to generate up to 6 MW of electricity	Gaseous and particulate emissions (NO <sub>x</sub> , SO <sub>x</sub> , CO and PM10)	Air/windborne pathway causing impacts to health and amenity	Nearest resident in the Town of Meekatharra is located 800 m away	Refer to Section 3.1.1	C = Slight L = Rare <b>Low Risk</b>	Y	Conditions <b>1.1.9</b> , 2.1.1, 4.1.1, 4.1.2, 4.1.3, 4.2.1 and 4.3.1	The risk is considered low as the power station is existing and has been operational for a number of years, and the power station will be decommissioned within approximately 12 months.  A design capacity limit for existing power generation at the Premises has been applied to the Licence.  Existing standard recording and reporting conditions apply.  General provisions of the <i>Environmental Protection Act 1996</i> relating to environmental harm apply.

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				
	Noise	Air/windborne pathway causing impacts to health and amenity	Nearest resident in the Town of Meekatharra is located 800 m away	Refer to Section 3.1.1	C = Minor L = Possible <b>Medium Risk</b>	Y	Conditions <b><u>1.1.9</u></b> , 2.1.1, 4.1.1, 4.1.2, 4.1.3, 4.2.1 and 4.3.1	<p>The risk is considered low as the power station is existing and has been operational for a number of years, and the power station will be decommissioned within approximately 12 months.</p> <p>Design capacity limit for power generation at the Premises has been applied to the Licence.</p> <p>Existing standard recording and reporting conditions apply.</p> <p>Provisions of the <i>Environmental Protection (Noise) Regulations 1997</i> apply.</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 21 December 2022	Licence Holder clarified the number of LNG storage tanks to be constructed and waved the rest of the 21 day consultation period	Noted and updated by DWER

## 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
N/A	Inclusion of Category 52 and 84 into the prescribed premises table on the Licence front page.
1.1.9	Inclusion of category 52 and 84 into the production or design capacity limit table.
1.1.10	Inclusion of construction requirements for the proposed new Hybrid Power Generation Facility.
New Figure 22 in Schedule 1	New map to show the location of the proposed new Hybrid Power Generation Facility and LNG Storage Area.
New Figure 23 in Schedule 1	New map to show the layout of the Hybrid Power Generation Facility and LNG Storage Area

## 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. Big Bell Gold Operations Pty Ltd, Meekatharra Gold Operations, Supporting Document Amendment to Licence L4496/1988/11, September 2022

## Appendix 1: Application validation summary

SECTION 1: APPLICATION SUMMARY (as updated from validation checklist)				
<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 type="checkbox"/>	Current works approval number:		
Amendment to licence	<input checked="" type="checkbox"/>	Current licence number:	L4496/1988/11	
		Relevant works approval number:		N/A <input type="checkbox"/>
Registration	<input type="checkbox"/>	Current works approval number:		None <input type="checkbox"/>
Date application received	7 September 2022			
<b>Applicant and Premises details</b>				
Applicant name/s (full legal name/s)	Big Bell Gold Operations Pty Ltd			
Premises name	Bluebird Gold Mine (request for change to Meekatharra Gold Operations)			
Premises location	Mining tenements identified in section 2.7 of application form.			
Local Government Authority	Shire of Meekatharra			
<b>Application documents</b>				
HPCM file reference number:	DER2017/002073			
Key application documents (additional to application form):	Big Bell Gold Operations Pty Ltd, <i>Meekatharra Gold Operations, Supporting Document Amendment to Licence L4496/1988/11, September 2022</i>			
<b>Scope of application/assessment</b>				

<p>Summary of proposed activities or changes to existing operations.</p>	<p>Licence amended to include Category 52 (Electric power generation) to account for the existing electric power generating facilities at the Premises.</p> <p>When the Licence was amended on 28/7/2020, two additional mining locations (Paddy's Flat and Reedy) were included as part of the Bluebird Gold Mine Prescribed Premises boundary. The two additional mining locations each had existing stand-alone electric power generating facilities however these were not considered at the time of assessment. The department has now become aware that the combined total design capacity of all electric power generating at the Premises exceeds the 10 MW threshold for when a Category 52 licence is required (using diesel fuel). The total combined design capacity of all electric power generating at the Premises is 21 MW (using diesel fuel) which consists of the following:</p> <ul style="list-style-type: none"> <li>• Bluebird Processing facility – 9 MW</li> <li>• Bluebird underground – 3 MW</li> <li>• Paddy's Flat – 6 MW</li> <li>• Reedy – 3 MW</li> </ul> <p>Additionally, the Licence Holder proposes to construct and operate a Hybrid Power Generation Facility at the Bluebird Gold Mine. This facility will eventually replace the Bluebird and Paddy's Flat Power Stations which are no longer viable and will be decommissioned.</p> <p>The Hybrid Power Project consists of the installation of a power station, a photovoltaic solar array, liquefied natural gas (LNG) storage and powerlines.</p> <p>The proposed Hybrid Power Project consists of the following:</p> <ul style="list-style-type: none"> <li>• Nine (9) Caterpillar 3512 Gas Powered Generators and two (2) Cummins Dual Fuel KTA50 Continuous Dual Fuel Generators for a combined output of 15.2 MW.</li> <li>• 13.1 megawatt (MW) photovoltaic solar array</li> <li>• 5 MW battery storage system</li> <li>• Three (3) 370,000L LNG storage vessels</li> </ul> <p>The design capacity for the gas fired generators at the proposed Hybrid Power Project is greater than 10 MW for when a Category 84 is required.</p>
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Category number/s (activities that cause the premises to become prescribed premises)

Table 1: Prescribed premises categories

Prescribed premises category and description	Proposed production or design capacity	Proposed changes to the production or design capacity (amendments only)
<b>Category 52: Electric power generation:</b> premises (other than premises within category 53 or an emergency or standby power generating plant) on which electrical power is generated using a fuel.	21 megawatts using diesel fuel	New category to regulate existing electrical power generating infrastructure.
<b>Category 84: Electric power generation:</b> premises (other than premises within category 53 or an emergency or standby power generating plant) on which electrical power is commercially generated using natural gas as a fuel.	15.2 megawatts using natural gas	New category for the construction and operation of electrical power generating infrastructure.

**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: 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 type="checkbox"/> No <input checked="" type="checkbox"/>	Ministerial statement No: EPA Report No:
Has the proposal been referred and/or assessed under the EPBC Act?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Reference No:
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 checked="" type="checkbox"/> Expiry: Other evidence <input type="checkbox"/> Expiry:
Has the applicant obtained all relevant planning approvals?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" 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 type="checkbox"/> No <input checked="" type="checkbox"/>	CPS No: N/A 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"/>	Application reference No: N/A Licence/permit No: N/A No clearing is proposed.

<p>Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>Application reference No: Licence/permit No: Licence / permit not required.</p>
<p>Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>Name: N/A Type: Has Regulatory Services (Water) been consulted? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Regional office:</p>
<p>Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>Name: N/A Priority: P1 / P2 / P3 / 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 type="checkbox"/></p>
<p>Is the Premises subject to any other Acts or subsidiary regulations (e.g. <i>Dangerous Goods Safety Act 2004</i>, <i>Environmental Protection (Controlled Waste) Regulations 2004</i>, <i>State Agreement Act xxxx</i>)</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	<p><i>Dangerous Goods Safety Act 2004</i></p>
<p>Is the Premises within an Environmental Protection Policy (EPP) Area?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	
<p>Is the Premises subject to any EPP requirements?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	
<p>Is the Premises a known or suspected contaminated site under the <i>Contaminated Sites Act 2003</i>?</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>	<p>Classification: N/A Date of classification: N/A</p>