



## Application for Licence

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

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<b>Licence Number</b>	L9415/2023/1
<b>Applicant</b>	Pilbara Energy (Generation) Pty Ltd
<b>ACN</b>	631 303 305
<b>File number</b>	DER2023/000452
<b>Premises</b>	PEG Power Station Solomon Iron Ore Mine  Legal description Part of Mining Tenement L47/901 As defined by the coordinates in Schedule 2 of the issued licence
<b>Date of report</b>	21 January 2025
<b>Decision</b>	Licence granted

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## 1. Decision summary

This decision report documents the assessment of potential risks to the environment and public health from emissions and discharges during the operation of the premises. As a result of this assessment, licence L9415/2023/1 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://www.wa.gov.au/service/building-utilities-and-essential-services/integrated-essential-services/dwer-regulatory-documents>.

### 2.2 Application summary and overview of premises

On 7 July 2023, Pilbara Energy (Generation) Pty Ltd (PEG; the applicant) submitted an application for a licence to the department under section 57 of the *Environmental Protection Act 1986* (EP Act).

Works approval W6516/2021/1 (the works approval) was granted to the applicant on 26 March 2021 which authorised establishment and time limited operation of a power station (PEG power station) within part of Mining Tenement L47/901 (premises) at the Solomon Iron Ore Mine adjacent to the Solomon Power station. Construction of the power station was completed in May 2023 and the applicant has submitted compliance documentation required by the works approval. The department previously completed a risk assessment for the emissions from the ongoing operation of the power station through the works approval application (DWER 2021) and the applicant is now seeking a new licence for ongoing operation of the premises. .

The premises relates to Category 52 – Power Generation and the assessed production capacity under Schedule 1 of the Environmental Protection Regulations 1987 (EP Regulations) which are defined in Licence L9415/2023/1. The infrastructure and equipment relating to the premises category and any associated activities which the department has considered in line with *Guideline: Risk Assessments* (DWER 2020) are outlined in licence L9415/2023/1.

The premises has 14 gas-fired reciprocating engines with a combined maximum production capacity of 165 Mwe.

### 2.3 Compliance documentation

The applicant submitted an Environmental Compliance Report (ECR) on 31 May 2023 (and a subsequent updated version on 22 August 2023) confirming construction of the premises was undertaken in accordance with the works approval conditions and provided results from air emission and surface water monitoring required by the works approval. On review of the document the delegated officer considered that all infrastructure had been installed according to the design and construction/installation requirements in W6516/2021/1 condition 1, however an additional engine oil service storage tank that was not specifically authorised under W6516/2021/1 was constructed. As risk of impacts from emissions from the additional tank has not previously been assessed these are considered in the risk assessment documented in Table 5.

The department reviewed the air emission monitoring data submitted as required by condition 14(b) of W6516/2021/1. As discussed in Section 3, the monitored emission rates for NO<sub>x</sub> from the engines were of particular importance to validate the emission rate used in the Air Quality Impact Assessment (AQIA) which was considered for the works approval application, and the

NO<sub>x</sub> monitoring results for all engines were below the estimated value (3.8 g/s) which informed the AQIA.

## 2.4 Part IV of the EP Act

The proposal to construct and operate the PEG power station was referred to the Environmental Protection Authority (EPA) under Part IV of the EP Act on 22 May 2020 and was assessed through a Public Environmental Review (PER) assessment process. The EPA released its report and recommendation on the project (EPA Report 1686) in August 2020 and Ministerial approval for the proposal was granted through Ministerial Statement 1161 (MS 1161) on 1 February 2021.

The EPA's assessment of the PEG power station proposal considered the following key environmental factors relevant to the construction and operation of the power station:

- greenhouse gas emissions; and
- air quality

EPA Report 1686 notes that the EPA consulted with the department 'with regard to the management of emissions from the PEG power station and is satisfied that Air Quality impacts can be managed as a prescribed premises (Category 52) through licensing under Part V of the EP Act'.

### 2.4.1 Ministerial Statement 1161

MS 1161 approved the implementation of the proposal subject to conditions. Condition 6 of MS 1161 regulates greenhouse gas emissions including defining the maximum extent of greenhouse gas emissions for the premises, stipulating greenhouse gas emissions reporting requirements and the development of a Greenhouse Gas Management Plan.

In the licence application the applicant proposed to install a 15<sup>th</sup> 'time-limited power' engine, however the additional generator was considered contrary to an implementation agreement or decision under Part IV of the EP Act as Schedule 1 of MS 1161 specified the authorised extent of power generation as 14 gas-fired reciprocating engines with an installed capacity of 165 MW at this time. Following The applicant advised the department on 29 August 2023 that they withdraw the proposal for a 15<sup>th</sup> engine from the scope of the licence application, and the licence application is limited to the operation of the installed 14 engines only.

On 25 October 2024 MS 1161 was amended under section 45C(1) of the EP Act to alter the authorises extent of the proposal to 16 gas-fired reciprocating engines with an installed capacity of up to 186.5 MW. The applicant did not seek any further changes to the scope of the assessment therefore the application scope pertains to 14 gas-fired reciprocating engines with an installed capacity of 165 MW. The applicant is however able to submit a future application under Part V of the EP Act to seek authorisation for additional power generation capacity.

## 3. Air quality modelling and monitoring review

The applicant supplied an Air Quality Impact Assessment (AQIA) undertaken by SLR (SLR 2020) with the works approval application. As noted in the decision report for W6516/2021/1 (DWER 2021), modelling indicated that the only pollutant of concern was NO<sub>2</sub> as it was the only pollutant indicating a potential for exceedance of the National Environment Protection (Ambient Air Quality) Measure (NEPM) standard (SLR 2020). As the NEPM was revised in 2021, including the air quality standard for NO<sub>2</sub>, the department requested that the applicant provide an updated AQIA in order for the department to assess whether cumulative NO<sub>2</sub> emissions from the PEG power station (PEG PS) and the existing Solomon power station (SPS) can comply with the current NEPM standard (NEPM 2021). The applicant submitted stack emission monitoring results as required by condition 9 of W6516/2021/1, that indicated NO<sub>2</sub> results

emission rates were at or below the expected emission rates that were used for the AQIA. The applicant submitted a revised AQIA (SLR 2023) to the department on 20 October 2023.

The revised AQIA (SLR 2023) used a fixed NO<sub>2</sub>/NO<sub>x</sub> ratio of 0.3, and included results for a more conservative assessment approach using the Ozone Limiting Method (OLM). A background ozone concentration of 60 ppb was adopted for this analysis based on the Pilbara Air Quality Study, which included ozone monitoring data collected in 2004. Seven different scenarios were modelled for various operating conditions for the SPS, the PEG PS, and the concurrent operation of both stations under worst case meteorological conditions. Table 1 below provides a description of each scenario, along with the AQIA predicted maximum 1-hour average ground level concentration (GLC) of NO<sub>2</sub> at identified sensitive receptor locations.

**Table 1: Maximum 1-Hour Average NO<sub>2</sub> predicted at closest sensitive receptors in µg/m<sup>3</sup> – Fixed ratio (30%) and OLM (60ppb O<sub>3</sub>) methods**

Operating Scenarios modelled			Karijini National Park		Hamersley Gorge		Hamersley station	
			30%	OLM	30%	OLM	30%	OLM
SPS Only	Maximum load - Gas	1	27	91	14	47	3.8	13
	Maximum load - Diesel	2	48	154	25	83	6.3	21
	Typical Load - Gas	3	7	23	3.8	13	1.2	3.9
PEG PS Only	Maximum Load	4	12	40	12	41	1.8	5.9
Cumulative impacts of SPS and PEG PS	Scenarios 1 and 4	5	37	122	24	80	4.7	16
	Scenarios 2 and 4	6	57	160	37	124	7.2	24
	Scenarios 3 and 4	7	16	55	14	46	2.5	8.3

SLR conducted an ozone background sensitivity analysis to evaluate how variations in assumed ambient O<sub>3</sub> levels would impact predicted peak NO<sub>2</sub> concentrations at Karijini National Park for Scenario 6, identified as the worst-case scenario. The analysis examined less conservative ambient O<sub>3</sub> levels of 40 ppb and 50 ppb. SLR noted that the Woodside ambient monitoring network (2009–2015) considered 60 ppb as a conservative estimate for the Karratha/Dampier region and recorded 90 th percentile O<sub>3</sub> values up to 35 ppb. Results from this sensitivity test are shown in Table 2: Results from background ozone sensitivity modelling compared to NEPM criteria for NO<sub>2</sub> with further analysis of how it compares to the NEPM criterion for 1-hr NO<sub>2</sub>.

**Table 2: Results from background ozone sensitivity modelling compared to NEPM criteria for NO<sub>2</sub> at closest receptor**

Assumed background ozone concentration (ppb)	Maximum 1-Hr average NO <sub>2</sub> predicted GLC for scenario 6 calculated using OLM at Karijini National Park (µg/m <sup>3</sup> )	Percentage of NEPM Standard for 1-Hr NO <sub>2</sub> (164 µg/m <sup>3</sup> )
60	160	97%
50	140	85%
40	119	73%

The department reviewed the revised AQIA (SLR 2023) and considers both fixed ration and OLM modelling approaches to be suitable and appropriately conservative. The department notes that the modelling approach in the revised AQIA is more “realistically conservative” compared to the “overly conservative” approach in the original AQIA prepared for the works approval. The background ozone values of 40 ppb and 50 ppb, used in the OLM method to determine NO<sub>2</sub> GLCs, are considered appropriate for the PEG PS location.

The delegated officer is satisfied that the predicted NO<sub>2</sub> GLCs for the worst-case operational scenario do not exceed the NEPM 2021 criteria at the sensitive receptors identified. The higher NO<sub>2</sub> GLCs as seen in Table 1 and 2 are predicted for the worst-case operational scenario, using the most conservative modelling approach and background ozone concentration. However, this assumes concurrent operation of the SPS at maximum load burning diesel and the PEG PS also at maximum load, which is improbable. Since Fortescue acquired the SPS in 2017, diesel consumption has been negligible, with National Greenhouse and Energy Reporting (NGER) reports for 2017–2018 and 2018–2019 recording zero litres of diesel use (SLR 2023). Additionally, as both power stations service the Solomon Mine, it is noted in the application that it is improbable for the power demand to require all generators at both facilities to operate at maximum load simultaneously, adding to the conservativeness of the modelling conducted. The delegated officer considers the likelihood of this scenario occurring simultaneously with adverse meteorological conditions to be rare.

The 2020 AQIA developed for the works approval included contour plots for each scenario listed in Table 1. The contour plot for scenario seven can be seen in Figure 1 illustrating predicted GLCs in a regional context for a more typical operating scenario. Note that the contour plot is for the original AQIA developed in 2020 and not the revised 2023 AQIA and depicts marginally different GLCs (higher) to those presented in Table 1 as the modelling was more conservative.



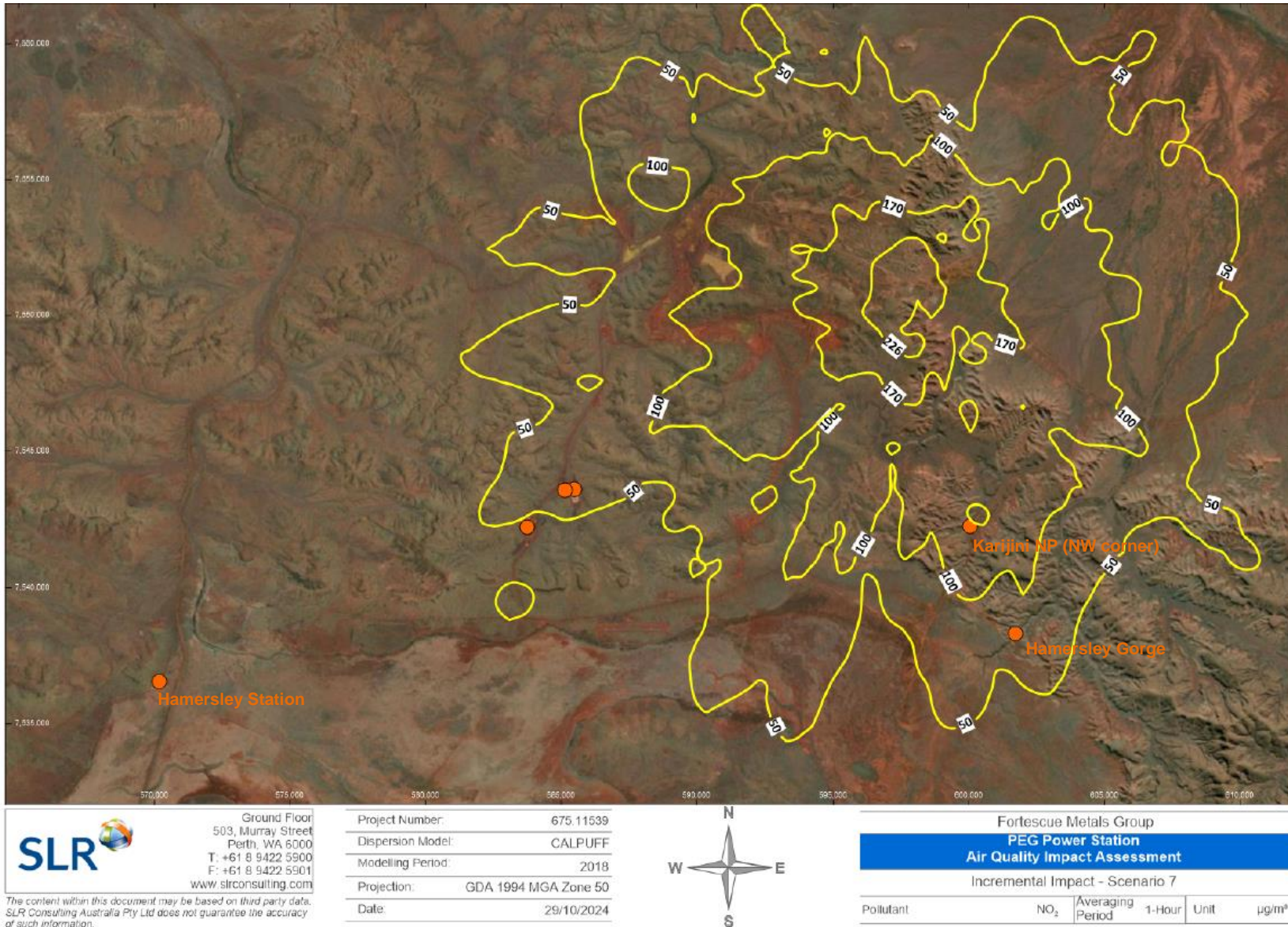


Figure 1: Contour plot of predicted maximum 1-hr NO<sub>2</sub> concentrations from Scenario 7

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## 4. 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.

### 4.1 Source-pathways and receptors

#### 4.1.1 Emissions and controls

The key emissions and associated actual or likely pathway during premises operation which have been considered in this decision report are detailed in Table 3 below. Table 3 also details the control measures the applicant has proposed to assist in controlling these emissions, where necessary.

**Table 3: Proposed applicant controls**

Emission	Sources	Potential pathways	Proposed controls
<b>Operation</b>			
Air emissions	Operation of gas and diesel generators	Air/windborne pathway	<ul style="list-style-type: none"> <li>• Each of the 14 x gas fired engines has an exhaust stack that is 26 m above finished floor level and an internal diameter of 1.2m.</li> <li>• Engines will be operated and maintained in line with manufacturer specifications to minimise emissions;</li> <li>• Emergency diesel engines will only be operated in contingency and ad-hoc events such as routine maintenance and servicing, shutdown activities and/or network blackouts.</li> <li>• Annual stack testing of emissions to air for the same suite of parameters as was undertaken during time limited operations (NOx as NO<sub>2</sub>; SO<sub>2</sub>; PM; CO; Formaldehyde; Benzene; Toluene; Ethylbenzene; Xylene and Total VOCs) and with the same approved methods (W6516/2021/1).</li> </ul>
Hydrocarbons	Storage, use and loading/unloading of hydrocarbons (oil and diesel) and other chemicals	Direct discharge to land via leaks and spills	<ul style="list-style-type: none"> <li>• Diesel storage tanks, Electricity transformer – oil storage tanks, engine oil storage tanks, engine oil service storage tank and waste oil storage tank are self-bunded to AS 1940.</li> <li>• Storage tanks are fitted with a leak monitoring and alarm shutdown system and a high-level alarm.</li> <li>• Chemical and hydrocarbon transport, storage, handling, unloading and disposal will be managed in accordance with: Fortescue's Chemical and Hydrocarbon</li> </ul>



Emission	Sources	Potential pathways	Proposed controls
			<p>Management Plan (100-PL-EN-0011); Environmental Spills Procedure (IO-PRE-EN-0003); Chemical and Hydrocarbon Storage Procedure (100-PR-EN-1064); and Environmental Protection (Controlled Waste) Regulations.</p> <ul style="list-style-type: none"> <li>Wastewater and spills within the engine hall are collected within internal sumps and directed to a cyclonic system for treatment with treated water stored and removed in a grey water tank (no discharge to the environment).</li> </ul>
<p>Potentially hydrocarbon contaminated wastewater or runoff</p>	<p>Operation of Coalescing Oily Water Separator (COWS)</p> <hr/> <p>Storage, use and loading/unloading of hydrocarbons (oil and diesel) and other chemicals</p>	<p>Direct discharge to land via V-drain from the outflow discharge W2</p>	<ul style="list-style-type: none"> <li>Surface water will be managed in accordance with Fortescue’s Surface Water Management Plan (100-PL-EN-1015) and Standard Engineering Specification for Drainage and Flood Protection (100-SP-CI-0004).</li> <li>Monitoring of TRH from W2 discharge point as per AS/NZS 5667.1 &amp; AS/NZS 5667.10.</li> <li>Only treated wastewater will be discharged via a V drain to the environment at discharge point W2 with TRH levels &lt;15mg/L and monitored quarterly if a discharge occurs in the quarterly period.</li> <li>The Coalescing Oily Water Separator (COWS) is installed with an Automatic Closure Device (ACD) to close when the maximum storage capacity of oil is reached in the system, retaining the oil in the first chamber of the COWS unit.</li> <li>Runoff from the tanker loading and unloading area is diverted to sumps and passes through the COWS system.</li> <li>Hydrocarbons extracted by the COWS system will be stored in an oil storage tank which will be regularly collected by an approved controlled waste carrier.</li> <li>Chemical and hydrocarbon transport, storage, handling, unloading and disposal will be managed in accordance with: Fortescue’s Chemical and Hydrocarbon Management Plan (IO-PL-EN-0004); Environmental Spills Procedure (IO-PRE-EN-0003); Chemical and Hydrocarbon Storage Procedure (45-PR-EN-0041); and Environmental Protection (Controlled Waste) Regulations.</li> </ul>

### 4.1.2 Receptors

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

Table 4 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)). Figure 2 shows the location of the power station in a regional context.

**Table 4: Sensitive human and environmental receptors and distance from prescribed activity**

Human receptors	Approximate distance from prescribed activity
Hamersley Station	32 km south-west of the premises boundary
Tourists at Hamersley Gorge within Karijini National Park	12.3 km south of the premises boundary
Yindjibarndi Native Title area accessible to Traditional Owners for camping, use of water, perform ceremony etc.	Premises is within the Yindjibarndi Determination area where Native title exists (non-exclusive) and is 305 m east and 7200 m north-west of where Native title exists (exclusive).
Environmental receptors	Approximate distance from prescribed activity
Aboriginal heritage site	1.3 km west of the premises boundary
Karijini National Park	8 km south of the premises boundary
Hamersley Gorge	12.5 km south of the premises boundary
Priority 1 Ecological Community	12 km south-west of the premises boundary
Priority 2 Public Drinking Water Source Area (PDWSA) (Country Areas Water Supply Act 1947)	14 km west of the premises boundary

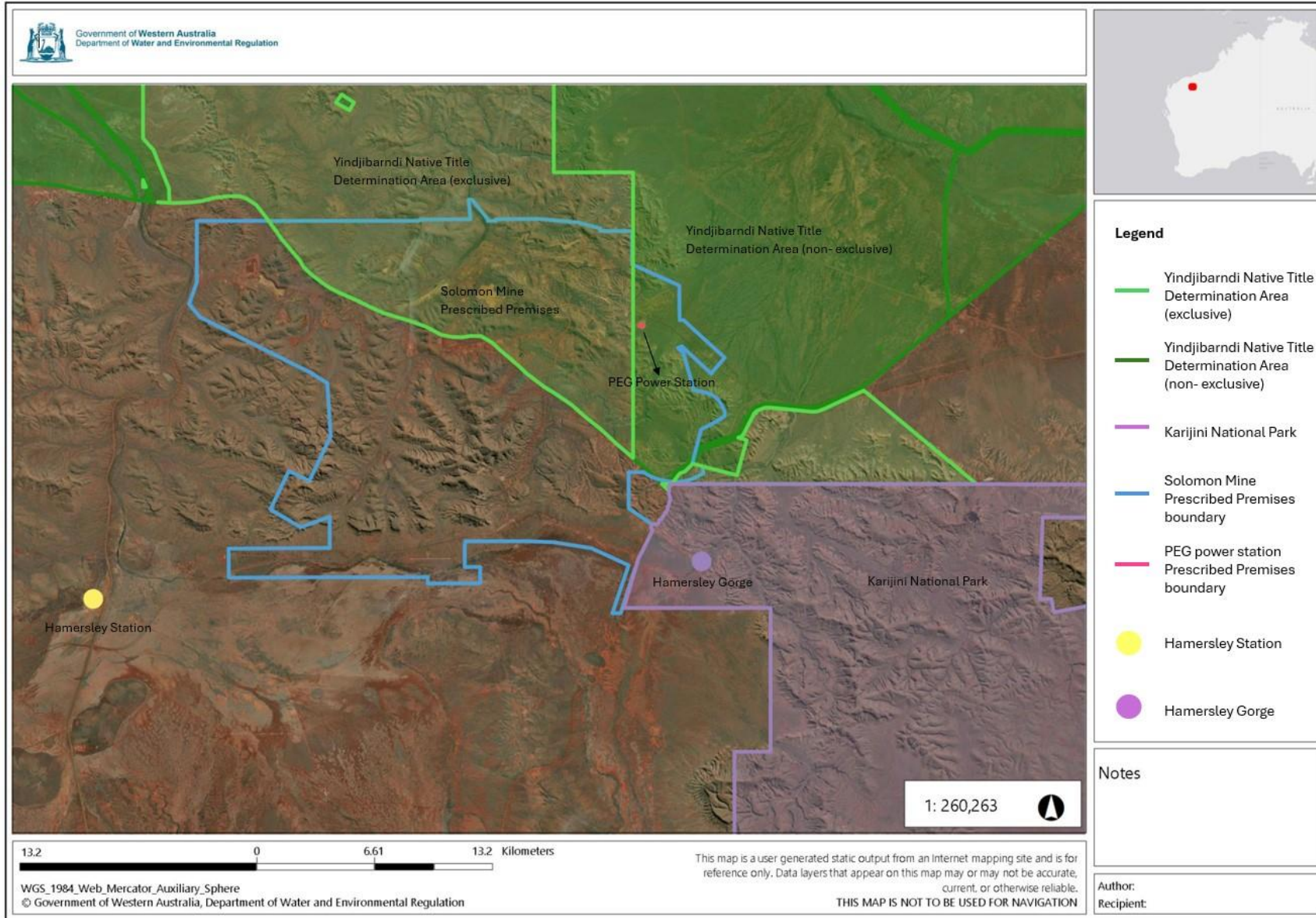


Figure 2: Location of PEG Power Station in regional context

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## 4.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) for each identified emission source and takes into account potential source-pathway and receptor linkages as identified in Section 4.1. 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 4.1), 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 licence 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 5.

Licence L9415/2023/1 that accompanies this decision report authorises emissions associated with the operation of the premises i.e. power station activities.

The conditions in the issued licence, as outlined in Table 5 have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

**Table 5: Risk assessment of potential emissions and discharges from the premises during operation**

Risk events					Risk rating <sup>1</sup> C = consequence L = likelihood	Applicant controls sufficient?	Conditions <sup>2</sup> of licence	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
<b>Operation</b>								
Operation of gas engines and diesel back up generators	Air emissions (NO <sub>x</sub> , SO <sub>x</sub> , PM <sub>10</sub> , VOCs, CO)	Air / windborne pathway causing impacts to health and amenity	Karijini National Park (Hamersley Gorge 12 km south east)	Refer to Section 4.1.1.	C = Minor L = Unlikely <b>Medium Risk</b>	Y	Condition 1, 2, 3, 4, 5, 6, 7, 10	The delegated officer has considered the stack emission data from W6516/2021/1 and the updated AQIA (SLR 2023) that compared NO <sub>2</sub> emissions to the current 1-hr NEPM standard for NO <sub>2</sub> (outlined in section 3).  The delegated officer considers that the NO <sub>2</sub> emissions from the power station are unlikely to exceed the NEPM standard at the closest sensitive receptor modelled for Karijini National Park as outlined in section 3.  As the premises will contribute air emissions on an ongoing basis controls are appropriate to continue to validate that air emissions are acceptable. The applicant's controls, including the proposal for ongoing annual monitoring and prescribing stack heights (that the AQIA was based on), were assessed and, in addition to a NO <sub>2</sub> limit as per W6516/2021/1, were considered appropriate to maintain an acceptable level of risk therefore these requirements have been conditioned within the licence. Annual monitoring data and an interpretation of the results are required to be reported to the department via the Biennial Environmental Report.  As outlined in section 2.4, Ministerial Statement 1161 regulates greenhouse gas emissions from the premises.
			Yindjibarndi Native Title area accessible to Traditional Owners for camping, use of water, perform		C = Major L = Unlikely <b>Medium Risk</b>			Y



Risk events					Risk rating <sup>1</sup> C = consequence L = likelihood	Applicant controls sufficient?	Conditions <sup>2</sup> of licence	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
			ceremony etc.				<p>seen in Figure 2, for the specified activities.</p> <p>The delegated officer considers Scenario 7, which assumed concurrent operation of SPS at actual load (gas fired) and PEG power station at maximum load, an appropriate scenario to assess impacts to receptors with the Yindjibarndi Native Title area. Figure 1 depicts the NO<sub>2</sub> predicted GLC's for this scenario, and illustrates predicted exceedance of the 1-hr NEPM standard for NO<sub>2</sub> (164µg/m<sup>3</sup>) within a relatively small portion of the Native Title area surrounding the power station. The potential consequence of air emissions from the PEG power station is assessed as major, due to this predicted exceedance. However, the delegated officer notes that the NEPM standard adopted as the specific consequence criteria was developed for population health considerations which does not directly align with the specified land uses for this portion of the Native Title area (camping, use of water, perform ceremony etc.)</p> <p>The likelihood of the 1-hr NEPM standard for NO<sub>2</sub> being exceeded and causing amenity or health impacts is considered unlikely due to the nature of the use of the area, and the conservative approach adopted in the modelling as described in section 3, as scenario 7 incorporates multiple layers of conservatism. These include assuming the PEG power station is operating at maximum load, conservative NO<sub>2</sub> emission rates, the assumed 60 ppb background ozone levels, the assumed worst case meteorological conditions and the unlikely scenario of all these factors coinciding with traditional owners being present within the affected area considering there are no residences, and the predicted exceedances being largely within the premises boundary of the Solomon Mine.</p> <p>The delegated officer therefore considers there is a medium risk of air emissions impacting health or amenity within the Yindjibarndi Native Title area. As above, the applicant's proposed controls are appropriate to maintain an acceptable level of risk, and have been conditioned within the licence.</p>	

Risk events					Risk rating <sup>1</sup> C = consequence L = likelihood	Applicant controls sufficient?	Conditions <sup>2</sup> of licence	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
Operation of the Coalescing Oily Water Separator (COWS)	Hydrocarbons and Hydrocarbon contaminated wastewater	Direct discharge to land causing contaminated soil and seepage to groundwater	Soil directly underneath & groundwater (10- 30mbgl)	Refer to Section 4.1.1	C= Minor L = Unlikely <b>Medium Risk</b>	Y	Condition 1, 2, 3, 4, 10	<p>On the basis of the proposed applicant controls and demonstrated compliance with W6516/2021/1, the delegated officer determined that the risk of contamination impacts associated with ongoing operation is consistent with the assessment previously conducted for W6516/2021/1.</p> <p>Fortescue's Surface Water Management Plan notes quarterly and event based (related to rainfall and stream flow) monitoring at the discharge point of the oily water sump at the 'hydrocarbon storage areas'.</p> <p>The applicant's proposed controls include that only treated wastewater with TRH level of &lt;15 mg/L will be discharged however has not proposed an adequate mechanism to validate compliance with the limit with each discharge event only through the proposed quarterly monitoring.</p> <p>The applicant's controls to be conditioned in the licence are:</p> <ul style="list-style-type: none"> <li>• TRH is to be sampled quarterly when discharge occurs to determine compliance against the TRH discharge limit from the COWS system.</li> <li>• TRH discharge limit from the COWS system is 15 mg/L (in line with Water Quality Protection Note 68 (DoW 2013)).</li> <li>• Hydrocarbon spills will be cleaned up or directed to a treatment system and potentially contaminated runoff will be directed to a treatment system.</li> <li>• COWS will automatically close when maximum oil storage is reached.</li> <li>• COWS will be equipped with sensors and alarms to alert power station operators when waste oil must be pumped out which is to be undertaken by a licensed operator.</li> </ul>

Risk events					Risk rating <sup>1</sup> C = consequence L = likelihood	Applicant controls sufficient?	Conditions <sup>2</sup> of licence	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
Storage, use and loading/unloading of hydrocarbons (oil and diesel) and other chemicals	Hydrocarbons and Hydrocarbon contaminated wastewater	Direct discharge to land causing contaminated soil and seepage to groundwater	Soil directly underneath & groundwater (10- 30mbgl)	Refer to Section 4.1.1	C= Minor L = Unlikely <b>Medium Risk</b>	Y	Condition 1	<p>The delegated officer considers that the risk of contamination associated with the use, storage and loading/unloading of hydrocarbons, including the additional tank installed by the applicant, is consistent with the risk assessed for W6516/2021/1.</p> <p>The applicant reported that the engine oil service storage tank is constructed with the same controls as the hydrocarbon storage infrastructure specified in W6516/2021/1 including high level alarms, leak monitoring alarms and self-bunding to Australian Standard (AS 1940) <i>the storage and handling of flammable and combustible liquids</i>.</p> <p>The delegated officer determined the applicant's operational storage and maintenance controls for hydrocarbons and chemicals are critical for maintaining an acceptable level of risk and therefore determined to condition them on the licence. (Condition 1).</p>

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.

## 5. Consultation

The applicant was provided with the draft documents on 4 December 2024 and a summary of the applicant's comments on the risk assessment and draft conditions received on 23 December 2024 is provided in Appendix 1. A summary of the stakeholder consultation undertaken by the department in relation to the application is provided in Appendix 2.

## 6. Decision

The delegated officer has determined the proposal to operate the PEG power station, with an assessed maximum production capacity of 165 Mwe per year, does not pose an unacceptable risk of impacts to public health or the environment. The determination is based on the following:

- the infrastructure having been assessed as posing acceptable risk of impact to receptors for the grant of Works Approval W6516/2021/1;
- the Environmental Compliance Report submitted by the applicant on 31 May 2023 and updated on 22 August 2023 demonstrating compliance with Works Approval W6516/2021/1 with the exception of an additional engine oil service tank that has been assessed as part of this application;
- review of the air emission stack monitoring results and the revised AQIA (SLR 2023) finding the risk of air quality impacts with reference to the Air Guideline Values is acceptable.

The licence L9415/2023/1 contains conditions based on operational requirements of the as constructed premises infrastructure as outlined in condition 1 of works approval W6516/2021/1 and ongoing monitoring of treated wastewater and air emissions as proposed by the applicant to ensure an acceptable level of risk is maintained (as outlined in Table 5).

The premises is located on Mining Tenement L47/901 as granted under the *Mining Act 1978*. Mining Tenement L47/901 expires 25 June 2040, and the delegated officer has therefore determined in accordance with *Guidance Statement: Licence Duration* (DER 2016) to grant a licence term which expires in the same year as the Mining Tenement.

## 7. Conclusion

Based on the assessment in this decision report, the delegated officer has determined that a licence 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 Environment Regulation (DER) 2016, *Guidance Statement: Licence Duration*, Perth, Western Australia.
3. Department of Water (DoW) 2013, *Water quality protection note 68 – Mechanical equipment wash down*, Perth, Western Australia.
4. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Environmental Siting*, Perth, Western Australia.
5. DWER 2020, *Guideline: Risk Assessments*, Perth, Western Australia.
6. DWER 2021, *Policy: Compliance and Enforcement Policy*, Perth, Western Australia
7. DWER 2021, *Decision Report: Application for Works Approval W6516/2021/1*, Perth, Western Australia
8. DWER 2022, *Guideline: Industry Regulation licence reviews*, Perth, Western Australia
9. Fortescue Metals Group 2014, *Surface Water Management Plan (100-PL-EN-1015)*, December 2014.
10. SLR 2020, *Air Quality Impact Assessment for PEG Power Project – Revised Power Station Design* (SLR Ref: 675.11539-R03), December 2020.
11. SLR 2023, *Air Quality Impact Assessment for PEG Power Station – Updated Version* (SLR 620.040350.0001), October 2023.



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

Condition	Summary of applicant's comment	Departments response
Condition 1, Table 1 – Item 1, 2, 4,5,6 and 7	<p>The applicant requested a change to the wording of requirement for '<i>hydrocarbon spills or leaks must be cleaned up and stored in impervious containers for disposal</i>', proposing use of the term "appropriate containers" instead of the term "impervious containers" included in the condition.</p> <p>The applicant stated the term "impervious containers" is prescriptive and lacks operational flexibility, whereas "appropriate" provides additional clarity while maintaining the same intent, purpose, and outcome of the condition.</p> <p>The applicant noted that spills or leaks will be managed in accordance with the internal Fortescue Hydrocarbon Spill Procedure, which aligns with DWER requirements and reporting processes.</p>	<p>The delegated officer does not consider the term "impervious" to be prescriptive but rather necessary to ensure clarity and enforceability within the condition. In contrast, the term "appropriate" is viewed as introducing ambiguity, as it lacks a clear and measurable standard. The department requires terminology that ensures conditions are enforceable by being clear and precise on the outcome that must be achieved. As such, the condition was retained as written.</p>
Condition 1, Table 1 - Item 2	<p>The applicant acknowledged the department's request for clarification on the use of diesel engines and their operational scenarios and requested consideration for operational flexibility in using diesel engines at the PEG Power Station to meet energy needs and support other Fortescue Ltd projects.</p> <p>The applicant stated that emergency diesel engines are intended for contingency and ad-hoc events, including; routine maintenance and servicing, shutdown activities, and network blackouts. They confirmed that these events would be limited in duration, expected to occur infrequently, and would not impact sensitive receptors.</p> <p>The applicant noted that during these events, emergency diesel engines would operate for short durations in line with the manufacturer's specifications, with normal operations resuming as quickly as possible to re-establish steady-state conditions and standard production.</p>	<p>The scenarios outlined for the operation of the diesel engines to be reasonable. These scenarios have been incorporated into requirement b) of item 2, specifying the authorised circumstances under which the emergency diesel engines may operate.</p> <p>A requirement to monitor and report operating hours, energy generated and scenarios for the engines has also been included to provide a means for the department to verify that operation of the premises engines aligns with the scenarios described and assessed.</p>
Condition 2, Table 2	<p>The applicant advised that the discharge point height for the emergency diesel engine stacks is <math>\geq 5</math> m AGL and has provided an updated Figure 2 illustrating the discharge point locations.</p>	<p>The discharge point height of the diesel engine stacks, and Figure 2 of Schedule 1 have been updated to reflect the provided information.</p>
Condition 4, Table 4	<p>The applicant acknowledges that the Fortescue Surface Water Management Plan (100-PL-EN-1015) requires quarterly monitoring of treated wastewater but notes that treated wastewater from the W2 discharge point is discharged infrequently due to the limited volume of water available for discharge.</p> <p>The applicant proposes to monitor treated wastewater from discharge point W2 "quarterly if discharging" rather than "quarterly" as it will result in more accurate and representative</p>	<p>It is acknowledged that the applicant will be unable to obtain a sample if a discharge does not occur in a quarter. Therefore, a footnote has been updated to clarify samples are only required when there is a discharge of treated stormwater in that quarter.</p>

Condition	Summary of applicant's comment	Departments response
	<p>samples of treated wastewater.</p> <p>The applicant comments that minor amendment to the monitoring frequency will not alter the department's intended purpose and outcome, but will ensure a more accurate representation of the water quality being discharged and confirms that treated wastewater will be monitored in accordance with the relevant Australian Standards (AS/NZS 5667.1 &amp; AS/NZS 5667.10).</p>	
<p>Condition 8 and 9 (revised to 9 and 10)</p>	<p>The applicant has requested to change the reporting requirements of the Annual audit compliance report and Annual environmental report (AER) from 60 days after the annual period to the 31 March each year for the AACR and 31 March 2026 and biennially thereafter for the AER.</p> <p>The request is to achieve consistency across the applicant's other Part V licences and simplify their reporting requirements.</p>	<p>The request to extend the date of reporting requirements to 31 March each year for the AACR and the Environmental Report is considered acceptable and, conditions 9 and 10 have been updated to reflect this change. Biennial reporting for the Environmental Report is also considered acceptable given monitoring is low frequency and any limit exceedances would need to be reported annually within the AACR. The reporting frequency was changed with the first report due 31 March 2027 and subsequent reports biennially thereafter.</p>

## Appendix 2: Summary of consultation undertaken by the department

Consultation	Summary of comment received	Department's response
Application advertised on the department's website on 16 November 2023	No comments received.	N/A
Local Government Authority advised of proposal on 16 November 2023	The Shire of Ashburton advised on 7 December 2023 that they raise no objection to the proposal.	The delegated officer notes this information.
Department of Energy, Mines, Industry Regulation and Safety (DEMIRS) advised of proposal on 16 November 2023	DEMIRS advised on 12 December 2023 that they have no comments on the proposal.	N/A
Yindjibarndi Ngurra Aboriginal Corporation (YNAC) RNTBC advised of proposal on 16 November 2023	Comments received on 15 December 2023. Yindjibarndi note that they are providing comment in the context of historical failures in the assessment and approval of the Solomon Iron Ore Project which have led to ongoing impacts on Yindjibarndi Country.	The delegated officer notes this information.
	Current impacts from Solomon Project: The impacts from the Solomon Iron Ore Project have included: <ul style="list-style-type: none"> <li>- Excluding Yindjibarndi people from access to significant parts of country, including areas over which they hold recognised exclusive Native Title rights;</li> <li>- Emissions of dust which have affected the quality of surface waters from which Yindjibarndi take water in accordance with their traditional rights; and</li> <li>- Noise and vibration emissions from mining operations which have impacts on the capacity of Yindjibarndi</li> </ul>	Under Part V of the EP Act, the department has undertaken an assessment of the licence application for the PEG power station consistent with its published Regulatory Framework, including the <i>Guideline: Risk Assessments (2020)</i> which provides for consideration of the risk of impacts from emissions and discharges to the environment and human health from prescribed activities under Schedule 1 of the Environmental Protection Regulations 1987. The Department acknowledges YNAC's concerns around land access however this does not fall within the Part V assessment scope of the application. Similarly dust and

Consultation	Summary of comment received	Department's response
	<p>people to utilise camping grounds such as those at Kangeenarina Creek.</p>	<p>noise impacts from mining activities at the Solomon project are not within the scope, as the assessment is limited to assessment of ongoing operation of the PEG power station.</p>
	<p><b>Sensitive receptors:</b> The works approval risk assessment to construct the PEG power station (W6516/2021/1) did not accurately characterise sensitive receptors in the vicinity of the premises, and other sensitive receptors include Yindjibarndi Ngurra (country) including Kangeenarina Creek.</p>	<p>The delegated officer acknowledges that assessment of the works approval application did not include an assessment of impacts to Yindjibarndi Ngurra from emissions and discharges related to the proposal.</p> <p>The department engaged with YNAC to further understand the specific locations on Yindjibarndi Ngurra that people may be using, YNAC advised that the entirety of the area where Yindjibarndi people hold Native Title rights and interests should be considered as a sensitive receptor.</p> <p>As outlined in Table 2, the Yindjibarndi Native Title determination areas have been identified as a sensitive receptor in the context of the area being accessible to Traditional Owners for camping, use of water, perform ceremony etc. Potential impacts to the Yindjibarndi people from emissions and discharges from the proposal has been risk assessed as per Table 4 for the Native title area as discrete locations were not disclosed via consultation.</p> <p>Kangeenarina Creek, located over 9 km north east of the premises, was not identified as a sensitive receptor, as the delegated officer has determined it is not expected to be impacted by emissions or discharges from the PEG PS.</p>
	<p><b>Noise and vibration:</b> The commissioning and ongoing operation of the PEG Power Station is likely to result in a net increase in noise and vibration emissions from the Solomon Project with cumulative impacts on Yindjibarndi Country.</p>	<p>It is anticipated that the operation of the PEG PS will not generate vibration emissions that could impact areas beyond the immediate vicinity of the power station. Noise emissions from the power station are not expected to make a significant contribution to noise from the broader Solomon mine operation or alter the existing risk profile of noise emissions from the broader Solomon Operation therefore have not been further considered with the assessment or subject to regulatory control.</p>

Consultation	Summary of comment received	Department's response
	<p><b>Cumulative impacts:</b> Noting that PEG power station is one component in a larger operation, the evaluation will need to occur in the context of the overall emissions of the Solomon Iron Ore Project.</p> <p>Request that the Solomon Mine Licence (L8464/2010/2) is reviewed with a focus on assessment of noise and vibration of the mine on Yindjibarndi Country.</p> <p>Preference that the licence is not granted until adequate protection of Yindjibarndi culture and rights from the impacts of the mine.</p>	<p>Cumulative impacts are considered in this assessment, particularly with respect to air emissions and the cumulative impacts of the adjacent SPS. The delegated officer included conditions in the licence to ensure that any impacts to receptors from ongoing operation of the power station are managed to acceptable levels in accordance with the assessed risk.</p> <p>The department acknowledges the request for the Solomon licence to be reviewed and advises that it undertakes periodic reviews of the risks associated with prescribed premises when deemed appropriate. These reviews are conducted in accordance with the <i>Guideline: Industry Regulation licence reviews (DWER 2022)</i> and the <i>Guideline: Risk Assessments (DWER 2020)</i> and are initiated based on factors outlined within these guidelines. The timing and scope of such reviews are determined through the department's risk-based regulatory framework.</p> <p>Notwithstanding this the operational licence for the Solomon Mine (L8464/2012/2) was amended in July 2024 and similar comments were considered during the assessment of this amendment application submitted by FMG. As per the department's response to similar comments submitted by YNAC regarding the licence amendment, concerns regarding potential breaches of Ministerial Statements or non-compliance with the Part V EP Act licence should be reported directly to the department at <a href="mailto:environmentwatch@dwer.wa.gov.au">environmentwatch@dwer.wa.gov.au</a>. If any non-compliance with licence conditions is identified, it will be addressed in line with DWER's <i>Compliance and Enforcement Policy (May 2021)</i>.</p>
Wintawari Guruma Aboriginal Corporation RNTBC advised on 16	No comments received	N/A



Consultation	Summary of comment received	Department's response
November 2023		
Banjima Native Title Aboriginal Corporation RNTBC advised on 16 November 2023	No comments received	N/A
Wirru-Murra Yindjibarndi Aboriginal Corporation advised on 16 November 2023	No comments received	N/A