

# **Decision Report**

# **Application for Works Approval**

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

Works Approval Number W6642/2022/1

Applicant	Paulsens East Iron Ore Pty Ltd
ACN	643 291 230
File number	DER2021/000591
Premises	Port of Ashburton Warrirda Road ONSLOW WA 6710
	Legal description –
	Part of Lot 569 on Deposited Plan 71345
	(as defined by the coordinates and map in Schedule 1 Figure 1 of the works approval)
Date of report	20/07/2022
Decision	Works approval granted

## Sonya Poor A/MANAGER, RESOURCE INDUSTRIES

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 operation of the premises. As a result of this assessment, works approval W6642/2022/1 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 <a href="https://dwer.wa.gov.au/regulatory-documents">https://dwer.wa.gov.au/regulatory-documents</a>.

## 2.2 Application summary and overview of premises

#### **Application summary**

On 14 October 2021, Paulsens East Iron Ore Pty Ltd (the Applicant), a wholly owned subsidiary of Strike Resources Limited, 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 works relating to the operation of a category 58 bulk material loading / unloading facility at the Ashburton Cargo Wharf (ACW), a multi-user berth within the Port of Ashburton (the Port). The Applicant proposes to utilise the southern and eastern berth at ACW for iron export activities.

Iron ore product from the Paulsens East Iron Ore (PEIO) Project will be trucked to an off-site stockpile site located approximately 18km south of the Port, where the iron ore will be temporarily stored and conditioned to a level above the Dust Extinction Moisture (DEM) level. Prior to the arrival of a ship, the conditioned iron ore will be loaded into Rota-boxes and transported to the Port on the back of road trucks. Once at the Port, two mobile harbour cranes or All Terrain Cranes will unload the conditioned ore from the Rota-boxes into a Special Purpose Transhipment Vessel (SPTV). The cranes, fitted with a Rotainer attachment will pick up the Rota-boxes and tip directly into the open hold of the SPTV. The Rota-boxes are fitted with lifting rams that automatically retract the lids when tipping to minimise dust emissions.

Plant and equipment associated with the loading activities will be stored at the Port site within an area known as 'Area 2' (refer Schedule 1 Figure 1 of works approval) which has not been included within the proposed prescribed premises boundary as no open materials will be stored in this area. The proposed port loading operations form an integral part of the PEIO Project, which will see the export of an estimated 6 million tonnes of iron ore product from PEIO mine over a four-year period, with commissioning of the mine planned to commence in 2022.

The Applicant has applied for a throughput of more than 5,000 but not more than 10,000 tonnes of bulk material to be handled through the Port per day and has estimated that up to 2 million tonnes of iron ore product will be exported per year. It is anticipated that 30 shipments will be scheduled per 12 month period, with each shipment requiring use of the Port facility for six consecutive days.

The Pilbara Ports Authority (PPA) have operational control over the Port under the *Port Authorities Act 1999* (WA). The Applicant proposes that during the iron ore export activities, the Applicant will be granted operational control over either the southern and eastern berth at ACW and when export activities are complete, operational control will be transferred back to PPA.

The premises relates to category 58 (bulk material loading or unloading) and the assessed production capacity under Schedule 1 of the *Environmental Protection Regulations 1987* (EP

Regulations) which are defined in works approval W6642/2022/1. 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 works approval W6642/2022/1.

#### Material characterisation

Each shipment will be loaded with a single ore product, either lump or fines. PEIO will produce a 3:1 ratio of lump to fines product. An estimate of the typical mineral composition is outlined below.

Mineral Phase	Concentration (w / w %)	
Lumps Product		
Hematite	10 – 30	
Kaolinite	20 – 50	
Quartz	10 – 30	
(Respirable Crystaline Silica)	0.002	
Goethite	5 – 20	
Mica	5 – 20	
Calcite	< 5	
Fines Product		
Hematite	< 60	
Kaolinite	10 - < 30	
Quartz	5 – 15	
(Respirable Crystaline Silica)	0.05	
Goethite	< 10	
Mica	< 10	

The Safety Data Sheets provided with the application classifies the lumps and fines as nonhazardous according to GHS Classifications and not toxic. The iron ore product contains trace levels of respirable crystalline silica (CAS 14808-60-7) and asbestos mineral fibre.

#### Moisture content

The iron ore product will be conditioned to a level above the DEM level at the off-site stock pile site. Based on test results to date (May 2021) the DEM for PEIO project lump is 2.9% and 4.3% for fines.

#### Leachability

Leachability test work was undertaken by SGS Australia in accordance with the relevant Australian Standards (Australian Standard Leaching Procedures). The test work indicated that the iron ore product represents a low risk if the product were inadvertently spilled into the marine environment.

#### Material Handling

Specialised containers known as Rota-boxes will be used to facilitate the shipments, which are considered to be a more effective handling method at controlling dust than conventional open loading systems. Rota-boxes are built for heavy duty mining applications that enable the smooth movement of cargo from mines to ships. The Rota-boxes are fully enclosed containers that potentially eliminate the generation of dust. These are used in combination with the Rotainer, which rotates 180 degrees and ejects the product during loading of the SPTV.

Pre-conditioned ore will be trucked, via covered road trains from the PEIO mine site to the offsite stockpile, located 18km south from the Port within mining tenement L08/271, for temporary storage prior to export. The ore will be conditioned to above the DEM limit while stockpiled, prior to being loaded into Rota-boxes and onto road trains for transport to the Port. The road trains and Rota-boxes will be visually inspected for dirt and product material prior to departing the offsite stockpile site and cleaned in a washdown facility if required. Approximately seven trucks will be running continually from the off-site stockpile site to the Port site during ship loading, for approximately six days.

Up to two Reach Stackers and a forklift will be utilised at the Port to unload the Rota-boxes from the road trains onto the wharf. The cranes will be fitted with a Rotainer attachment and will pick up the Rota-boxes and tip directly into the open hold of the SPTV. The Rota-boxes are fitted with lifting rams that automatically retract the lids when tipping to minimise dust emissions. It is anticipated that 14 - 18 Rota-boxes will be unloaded into a SPTV per hour per crane. Empty Rota-boxes will then be loaded onto trucks and taken off Port land.

#### Summary of premises

The Port is located approximately 12km south-west of the Town of Onslow, within the Ashburton North Strategic Industrial Area (ANSA). The Port currently accommodates natural gas processing for Liquified Natural Gas (LNG) exports to overseas markets and domestic gas to Western Australian intra-state markets. The ACW specifically handles project cargo, break bulk and general cargo (PPA, 2022).

Legislation	Details
Part IV of the EP Act	PPA currently hold Ministerial Statement 1131 (EPA Report 1653) which was published 23 April 2020 under Part IV of the EP Act.
	The Port was originally established as part of Chevron's Wheatstone Project under Ministerial Statement 873. Operational control of the Port was handed over from Chevron to PPA in April 2020, when Ministerial Statement 1131 was issued which replaced the port portion of MS 873. The shipping channel, material offloading facility and sections of access road within the Port that were constructed and commissioned by Chevron were transferred to PPA. PPA has the responsibility to implement statutory conditions of this approval, including those relating to the ongoing management of coastal processes and introduced marine pests.
	Chevron still operate and own their Wheatstone gas processing facility and associated trunkline and shipping channel.
Part V of the EP Act	The Applicant has applied for a works approval to operate under category 58 of Schedule 1 of the EP Regulations which relates to bulk material (other than salt) loading and/or unloading of a vessel.
	Loading activities that exceed 100 tonnes per day trigger this category and regulation under the EP Act.
	DWER regulates industrial emissions and discharges to the environment through a works approval and licensing process, under Part V of the EP Act. The EP Act requires a works approval to be obtained before constructing a prescribed industrial premises and makes it an offence to cause an emission or discharge unless a licence or registration is held for the premises. DWER notes that following the completion of the Time Limited Operation phase of this works approval, the Applicant will need to apply for a licence for ongoing operation of the iron ore export operations.

## 2.3 Legislative context and other approvals

Legislation	Details
	PPA has provided their written consent for the Applicant to hold the works approval and licence to occupy and operate at the port site during the iron ore export activities. When the iron export activities are complete, the Applicant will need to transfer their licence back to PPA.
Port Authorities Act 1999 (WA) Port Authorities Regulations 2001 (WA)	PPA have operational control over the Port under the <i>Port Authorities Act 1999</i> (WA). PPA is governed by a board of directors as per the Port Authorities Act and is appointed by the Minister for Planning and Infrastructure.
Ashburton North Strategic Industrial Area (ANSIA) Improvement Scheme	Improvement Scheme No. 1 was gazetted on 30 September 2016. The scheme is now operational and replaces the Shire of Ashburton's Town Planning Scheme No. 7 as the land use planning instrument for the ANSIA (Government of Western Australia, 2022).
No.1	The Department of Jobs, Tourism, Science and Innovation (JTSI) is the lead agency for the ANSIA, and LandCorp (Industrial Lands Authority) is the industrial estate manager.

# 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 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.

Emission	Sources	Potential pathways	Proposed controls	
Operation (du	Operation (during Environmental Commissioning and Time Limited Operations)			
Dust	Loading/unloading of iron ore product and mobile plant	Air / windborne pathway	• Stockpiled iron ore product will be conditioned to above the DEM limit prior to leaving the off-site stockpile site.	
			• The stockpiled iron ore product will be loaded into sealed Rota-boxes for transport to the Port via covered road trucks.	
			• Prior to leaving the off-site stockpile site, covered road trucks carrying the iron ore product will be	

**Table 1: Proposed applicant controls** 

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Emission	Sources	Potential pathways	Proposed controls
			inspected for material stuck to the exterior of the truck and cleaned if required in a designated washdown facility located at the off-site stockpile site.
			• 2 x mobile harbour cranes or All Terrain Cranes fitted with Rotainer attachment utilized for loading operations. Cranes will pick up the Rota-boxes and tip them directly into the open hold of the vessel using a rotating tipping frame.
			• The Rota-boxes are fitted with lifting rams that automatically retract the lids when tipping to minimize dust emissions.
			• A water misting curtain to be installed on the SPTV to be used during loading operations to minimise dust emissions.
			<ul> <li>At least two, static real-time dust monitors will be installed at the port site. The monitors will be Beta Attenuation Monitors (BAM) and will provide real time, hourly monitoring data (AS/NZS 3580.9.11:2016 for PM<sub>10</sub>), with automated remote warning system that can send alerts when wind speed exceeds 8m/s and/or a trigger value of 80 µg/m<sup>3</sup> over a 24 hour average for Particulate Matter less than 10 micron (PM10) in accordance with the National Environment Protection (Ambient Air Quality) Measure.</li> </ul>
			• If alerts are triggered mitigation actions will be implemented such as slowing the loading rate, reducing the height of tipping, increasing dust suppression or if necessary temporary suspension of works.
			• Onsite speed limited to 20km/hr in areas where pedestrians and vehicles may interact or as signposted.
Noise	Loading/unloading of iron ore product and mobile plant	Air / windborne pathway	<ul> <li>Low-noise plant and equipment will be used where practicable.</li> </ul>
Potentially contaminated stormwater	Loading/unloading of iron ore product and mobile plant	Spillage on the wharf draining to the marine environment	• Unloading to be conducted as per the Site Procedure only in approved areas. Rota-boxes are to be unloaded in authorised location only (back sloped wharf hardstand) and work is to be conducted as far as practicable from edge of wharf.
Iron ore product spill	Loading/unloading of iron ore product	Spillage on the SPTV Spillage on	• Work area large enough to accommodate vehicle/machinery/Rota-boxes operation and segregation and work to be conducted as per port stand-off requirements.
		the wharf Spillage directly into	• Trucks and Rota-boxes are only to be cleaned in designated washdown facility which will be located at the off-site stockpile site.

Emission	Sources	Potential pathways	Proposed controls
		the ocean	• Handling of all iron ore material will be carried out by properly trained workers and supervisors. No handling will be allowed prior to undertaking the appropriate training or induction session.
			• In the unlikely event of spillage on the wharf, the forklifts can be fitted with a bucket or sweeper attachment and material can be collected and placed back into a Rota-boxes from loading onto the SPTV for any material containment.
			• Fenders located on the edge of the wharf for any material containment.
			• In the event of spillage on the SPTV, the deck can be washed down. All water and material will report to an onboard sump. This sump can be emptied on the wharf via vacuum truck and returned to the Off- site stockpile.
			<ul> <li>Unloading and materials handling to be avoided in windy and/or choppy conditions when necessary.</li> </ul>
			<ul> <li>In the unlikely event of spillage of material into the ocean, PEIO will report the incident to the Pilbara Ports Authority and remediate as per their direction. Leachability test work will be conducted in the event of an iron ore spillage into marine waters.</li> </ul>
			• Spill kits will be readily available and well stocked onsite. Material Safety Data Sheet (MSDS) recommendations to be followed and workers required to wear personal protective equipment at the Port site, as per Hazardous Substances Procedure. In terms of spill disposal, recycling options are preferred and manufacturers will be consulted for recycling options. Alternately the State Land Waste Management Authority will be consulted for disposal advice.

#### 3.1.2 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. Protection of these parties often involves different exposure risks and prevention strategies, and is provided for under other state legislation.

Table 2 and Figure 1 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 2: Sensitive human and environmental receptors and distance from prescribed activity

Human receptors	Distance from prescribed activity
Chevron Wheatstone gas processing facility	Less than 500m to the southwest Jetty with LNG condensate pipelines 180m to the west
Onslow Salt Evaporation Ponds	3km southeast ( <i>Onslow Solar Salt Agreement Act 1992</i> project site boundary area 1.5km southeast)
Thalanyji Native Title Area (WCD2008/003)	The Port site is within the Native Title Area which spans over 11,120 square kilometers in the West Pilbara. (managed under MS 1131 which requires that the integrity and values of heritage sites are maintained between Ashburton Delta and Beadon Creek)
Environmental receptors	Distance from prescribed activity
Fauna	Multiple survey siting's of threatened and priority sea mammals and reptiles within 2km of the site e.g. green turtle, loggerhead turtle, flatback turtle, humpback whale, dugong, Australian humpback dolphin etc. (managed under MS 873)
Surface water	Within the Pilbara surface water area (RIWI 1914) The project area is surrounded by saline coastal flats and a number of ephemeral creeks and drainage lines exist adjacent to the project area e.g. Hooley Creek 1km east, Middle Creek 1.7km east and Four Mile Creek 2.5km east (Hooley Creek and Four Mile Creek are popular fishing spots) (managed under MS 1131)
Oceans	The project area is within the Indian Ocean. 'The port and the nearby Port of Onslow host a wide range of marine habitats characteristic of the nearshore and offshore Pilbara marine environment. The dominant habitat within the marine environment is unconsolidated sediment with limited areas of benthic primary producer habitat. Corals are common in the turbid inshore waters and around the seaward margins of the islands and shoals. Seagrasses are present in the shallow nearshore areas' (PPA, 2017). (managed under MS 873 and MS 1131)
Mangroves – benthic primary producer habitat	The project area is located 1.6km east of regionally significant tropical arid zone for

	mangroves. Mangroves are located 1.8km west of the project.
	(managed under MS1131 which requires PPA to implement approved Coastal Processes Monitoring and Management Plan which includes mangrove habitat monitoring)
Potential coral reef site	located 1.5km north-north east of project area (managed under MS 873 and 903)



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 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 W6642/2022/1 that accompanies this decision report authorises 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).

A licence is required following the time-limited operational phase authorised under the works approval to authorise emissions associated with the ongoing operation of the premises i.e. bulk loading activities. 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 operation

Risk events			Risk rating <sup>1</sup>	Annlinent				
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls	C = consequence L = likelihood	controls sufficient?	Regulatory controls	Reasoning
Operation (during en	vironmental commiss	ioning and time-lim	ited-operations oper	ations)				
Unloading of Rota- boxes onto berth, ore unloading from Rota-boxes to barge using a crane, re- loading empty Rota- boxes onto trucks	Dust from vehicle movements and loading activities	Air / windborne pathway causing impacts to health and amenity. The dust may be discomforting when inhaled and persons with impaired respiratory function, airway diseases and conditions may incur further disability if excessive concentrations of particulate are inhaled.	Industry neighbour Chevron Wheatstone gas processing facility~ 500m southwest Mangroves ~ 1.8km west Onslow Salt Evaporation Ponds ~ 3km southeast Marine environment - immediately adjacent to premises boundary	Refer to Section 3.1	C = Moderate L = Unlikely <b>Medium Risk</b>	Y	<ul> <li>Works approval controls:         <ul> <li>Requirement to load using Rota-boxes system and use a water mist screen during loading to reduce dust emissions;</li> <li>Rota-boxes fitted with lifting rams that automatically retract the lids when tipping to minimize dust emissions;</li> <li>Requirement for iron ore product to be loaded to a targeted moisture content of ≥ 2.9% w/w (for lumps) and ≥ 4.3% w/w (for lumps) and ≥ 4.3% w/w (for fines) as averaged over each shipment during the environmental commissioning and time limited operations periods;</li> <li>Requirement for loading from vertical drop heights less than 2m within the hold of the vessel;</li> <li>Requirement to clean Berth after each shipment;</li> <li>Requirement to install at least 2 Beta Attenuation Monitors at the Port site which operate continuously during loading operations in accordance with AS/NZS 3580.9.11:2016 for PM<sub>10</sub>; and</li> </ul> </li> <li>Requirement to conduct fugitive dust monitoring during environmental commissioning and time limited operation.</li> </ul>	The Rota-boxes loading system is a best practice loading technique for dust minimisation within the mining industry and has been successfully utilised at multiple WA Ports such as at the Port of Geraldton and the Port of Port Hedland. Samples of the iron ore product (both lumps and fines) were found to contain trace levels of respirable crystalline silica (RCS) and asbestos mineral fibre but are classified as non- hazardous according to GHS classifications. Given this classification and the lack of nearby sensitive receptors, the regulatory controls are sufficient to minimise on-site and off-site risks to the environment and human health during environmental commissioning and time limited operations. DMIRS regulates occupational health hazards at Ports and may implement additional regulatory controls as required to minimise risks to workers and visitors on-site.

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

Risk events					Risk rating <sup>1</sup>	Annlinent		
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls	C = consequence L = likelihood	controls sufficient?	Regulatory controls	Reasoning
Operation (during e	environmental commi	issioning and time-lin	nited-operations	operations)				
Unloading of Rota- boxes onto berth, ore unloading from Rota-boxes to barge using a crane, re-loading empty Rota-boxes onto trucks	Noise from machinery and truck movements	Air / windborne pathway causing impacts to health and amenity	Industry neighbour Chevron Wheatstone gas processing facility~ 500m southwest	Refer to Section 3.1	C = Slight L = Possible Low Risk	Y	<u>Works approval</u> <u>controls:</u> N/A	According to the Ashburton North Strategic Industrial Area (ANSIA) Improvement Scheme No.1, the strategic industry area must comply with the <i>Environmental Protection</i> ( <i>Noise</i> ) Regulations 1997, at sensitive land uses being 35dB(A). Noise is expected from the additional truck movements and loading activities for a combined total of approximately 180 days per year during loading campaigns of iron ore product, based on an anticipated scheduling of 30 shipments per year with each shipment requiring use of the marine facility for six consecutive days. Loading of the SPTV is expected to take approximately 15 hours per day. Vessels arrivals and departures to and from the ACW are restricted to daylight hours only, according to the Port of Ashburton Port Handbook (PPA,2020). Cumulative impacts may arise when loading occurs concurrently with other port activities, however, as loading is already undertaken at the eastern and southern berths of the Ashburton Cargo Wharf, maximum noise levels are not likely to increase from existing levels and therefore additional regulatory controls are not required.

Risk events				Risk rating <sup>1</sup>	Applicant				
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls	C = consequence L = likelihood	controls sufficient?	Regulatory controls	Reasoning	
Operation (during en	nvironmental com	missioning and time-li	imited-operations ope	rations)					
Unloading of Rota- boxes onto berth, ore unloading from Rota-boxes to barge using a crane, re- loading empty Rota- boxes onto trucks	Iron ore spill into marine environment	Direct pathway or discharge	Mangroves ~ 1.8km west Hooley Creek ~ 1km east Middle Creek ~ 1.7km east Four Mile Creek ~ 2.5km east Marine environment – immediately adjacent to premises boundary	Refer to Section 3.1	C = Minor L = Possible <b>Medium Risk</b>	Y	<ul> <li>Works approval controls:</li> <li>Requirement to load using Rota-boxes system;</li> <li>Requirement to conduct clean-up of Berth after each shipment;</li> <li>Requirement that solid iron ore waste material recovered from berth clean-up activities is returned to the off-site stockpile;</li> <li>No vehicle, trailer or Rota-boxes washdown is to occur at the Port site;</li> <li>Requirement for vessel to have on board sump for collection of deck washdown water; and</li> <li>Requirement for back sloping wharf hardstand with fenders located along the edge of the wharf to minimise loss of spilt iron ore product into the marine environment.</li> </ul>	As detailed in Section 3.1, the wharf is back sloped and there are fenders located on the edge of the wharf to help prevent material or potentially contaminated stormwater from the wharf draining to the marine environment. In the event of a spillage on the wharf spill kits are readily available on-site and the forklift can be fitted with a bucket or sweeper attachment for clean-up operations. In the event of spillage on the vessel, the deck can be washed down and all water and material will report to an onboard sump. No vehicle or equipment washdown is to occur onsite which will minimise the risk of potentially contaminated stormwater. If a spill into the marine environment were to occur the incident would be reported to PPA and be remediated as per their direction. Leachability testing has indicated the iron ore material represents a low risk to the marine environment. Given these controls and the low risk the iron ore material presents to the marine environment to acceptable levels during environmental commissioning and time limited operations.	

Risk events				Risk rating <sup>1</sup> Applicant				
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls	C = consequence L = likelihood	controls sufficient?	Regulatory controls	Reasoning
	Potentially contaminated stormwater	Overland runoff draining to marine environment and potentially causing ecosystem disturbance or impacting surface water quality			C = Minor L = Possible <b>Medium Risk</b>	Y		

# 4. Consultation

Table 4 provides a summary of the consultation undertaken by the department.

### Table 4: Consultation

Consultation method	Comments received	Department response
Application advertised on the department's website and in the West Australian newspaper on 14 February 2022	None received.	N/A
Local Government Authority the Shire of Ashburton advised of proposal on 14 February 2022	The Shire of Ashburton replied on 15 March 2022 confirming that they support the preferred option of Scenario 2b, noted as: Scenario 2b: The PEIO operating with custom designed ore trans-shipper transfer to Ocean Going Vessel, dust curtain applied on trans- shipper loading. The Shire also note that within the Ashburton North Strategic Industrial Area (ANSIA), Improvement Scheme No. 1: Ashburton North Strategic Industrial Area is the relevant planning instrument.	Department noted advice and incorporated into works approval risk assessment and controls.
Department of Mines, Industry Regulation and Safety (DMIRS) advised of proposal on 14 February 2022	No response received.	N/A
Buurabalayji Thalanyji Aboriginal Corporation advised of proposal on 14 February 2022	No response received.	N/A
Pilbara Ports Authority advised of proposal on 14 February 2022	PPA advised that they had no comments on the proposal on 14 March 2022.	N/A
Applicant was provided with draft works approval and decision report on 10 May 2022.	Comments received 27 May 2022. Refer to Appendix 1 Table 5 for comments summary.	Refer to Appendix 1 for Departments response to comments received.
Applicant was provided with second revision of draft works approval and decision report on 23 June 2022.	On 14 July 2022 the Applicant proposed a new dust monitor trigger value of 80ug/m <sup>3</sup> . No other changes were proposed. Refer to Appendix 1 Table 6 for comments summary.	Department accepted this revised trigger value and updated works approval and decision report for final issuing.

# 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) 2020, *Guideline: Environmental Siting*, Perth, Western Australia.
- 3. DWER 2020, Guideline: Risk Assessments, Perth, Western Australia.
- 4. Environmental Protection Authority (EPA) 2020, Ministerial Statement No. 1131 -Wheatstone development – shipping channel, materials offloading facility, and access road Shire of Ashburton, Accessed at <u>https://www.epa.wa.gov.au/sites/default/files/1MINSTAT/Statement%201131\_0.pdf</u>
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- 6. Government of Western Australia 2022, Ashburton North Strategic Industrial Area, Accessed at <u>https://www.wa.gov.au/government/publications/ashburton-north-</u><u>strategic-industrial-area</u>
- National Environmental Protection Council 1998, National Environment Protection (Ambient Air Quality) Measure. Accessed at <u>https://www.legislation.gov.au/Details/F2021C00475</u>
- Pilbara Ports Authority (PPA) 2022, Port Profile, Accessed at <u>https://www.pilbaraports.com.au/ports/port-of-ashburton/about-port-of-ashburton/port-profile</u>
- 9. Pilbara Ports Authority (PPA) 2020, *Port of Ashburton Port Handbook*, Accessed at <u>https://www.pilbaraports.com.au/about-ppa/publications/forms-and-publications/forms-publications/handbook/2020/june/port-of-ashburton-port-handbook</u>
- 10. Pilbara Ports Authority (PPA) 2017, Port of Ashburton Port Master Plan 2050, Accessed at <u>https://www.pilbaraports.com.au/about-ppa/publications/forms-and-publications/forms-publications/strategy-plan/2020/june/port-of-ashburton-land-use-master-plan-2050</u>

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

DWER information request	Summary of applicant's comment	Department's response
Works Approval Holder to provide coordinates for the location of the dust monitors and PM <sub>10</sub> exceedances to be used for automatic alerts.	MONITORING LOCATIONS The monitoring equipment will be located around the periphery of the proposal area, with placement guided by: <ul> <li>The location of proposed Port activities;</li> <li>Prevailing seasonal wind conditions;</li> <li>Proximity of Port activity to sensitive human receptors; and</li> <li>An objective of characterising airborne dust concentrations upwind and downwind of the disturbance footprint.</li> </ul> <li>The locations of the monitoring points may change in response to ongoing data analysis and community feedback. The fluidity of the monitoring locations is pivotal in maximising the value and reliability of data.</li> <li>The positioning of instruments will be cognisant of the likelihood of vandalism and theft. Monitoring locations will be chosen based on potential visual obscurity and where public access is minimised. The locations of compliance air quality monitoring stations are shown in Figure 1.</li>	Table 1 of the Works Approval requires that a minimum of two Beta Attenuation Monitors (BAM) installed at the Port site adjacent to the loading operations and operated in accordance with AS/NZS 3580.9.11:2016 for PM <sub>10</sub> (Methods for sampling and analysis of ambient air Determination of suspended particulate matter - PM 10 beta attenuation monitors).This Standard sets out general guidelines for the siting of ambient air monitoring equipment and specifies a number of siting parameters for individual air pollutants. As these monitors are to be used for compliance purposes, they must be suitably sited in a fixed location to ensure consistency and accuracy of data for assessment of dust generation from the Port loading activities during shipments. The department notes that location of the monitors may be changed in response to ongoing data analysis/ community feedback/likelihood of vandalism and theft, but a change in location would need to be applied for via a works approval amendment application, which provides evidence-based reasoning for the proposed change.

#### Table 5: Comments on draft works approval and decision report sent 10 May 2022 (first revision)

DWER information request	Summary of applicant's comment	Department's response			
	Figure 1 - MONITORING LOCATIONS				
	TELEMETRY AND ALERTS				
	<ul> <li>Monitoring equipment will be configured to inclui</li> <li>Automated remote warning system exceed the trigger values.</li> <li>Telemetry system to allow for remote Solar power or high capacity batte</li> </ul>				
	Trigger levels have been determined for short te investigation and pre-emptive preventative mean emissions in the event of an adverse trend.	Trigger levels have been determined for short term monitoring parameters to facilitate investigation and pre-emptive preventative measures, where relevant, to minimise dust emissions in the event of an adverse trend.			
	The following trigger levels have been adopted:				
	Parameter	Trigger Values			
	Particulate Matter less than 10 micron (PM10)	50 μg/m <sup>3</sup> 24 hour average			
	In the event that real time particulate monitoring are reached at any monitor, an alert will automa Officer.	identifies that ambient PM10 trigger criteria tically be initiated to the Senior Environmental			
	If Trigger Criteria are reached or exceeded, and on wind direction to believe PEIO Port activities elevated dust, the following measures will be im dust event:	after review there are grounds, based primarily are the cause or significant contributor to the plemented to limit the risk of escalation of the			
	A site inspection will be undertaken to identify the source(s) of the elevated results relative to wind conditions, Port activities and/or inactive exposed areas at the time.				
	implementation of additional dust of water over the source area; Consideration given to ceasing Po				
	conditions subside and the risk of threshold criteria is removed;	<ul> <li>Consideration given to ceasing Port activity in relevant areas that prevailing conditions subside and the risk of elevated dust concentrations exceeding threshold criteria is removed;</li> </ul>			
	Consideration given to liaison with susceptible to the dust event.	potentially affected residents who may be			
Works Approval Holder to confirm what machinery and/or equipment they have available to complete wharf	A Forklift with the ability to be fitted with a bucke clean up any spillages on the wharf.	Acknowledged and department deems clean up machinery/equipment acceptable. Amendment report and works approval updated to include reference to			

DWER information request	Summary of applicant's comment	Department's response
clean-up activities.		sweeper attachment in addition to the bucket attachment.
Works Approval Holder to specify preferred number of calendar days between 90 and 180 for the duration of time limited operations – this number is to match up with their anticipated number of shipments during time limited operations.	The Company will require 180 calendar days from the day the works approval holder meets the requirements of condition to conduct time limited operations for the export of iron ore product. This duration matches up with the Company's schedule of 30 shipments during each 12 month period, with each shipment requiring use of the marine facility for six (6) consecutive days	Based on an anticipated scheduling of 30 shipments per year, or a shipment roughly every 12 days, the department has decided to allow commissioning for three shipments, followed by a Time Limited Operations (TLO) period of 180 days during which the licence amendment application will be assessed. The works approval has been updated to reflect these
Works Approval Holder to specify their preferred number of shipments for the duration of time limited operations and the anticipated maximum	The company confirms that the export of Iron Ore Product will consist of 30 shipments in total, each no more than 60,000 tonnes of iron ore product per shipment.	new conditions. The department recommends that the Works Approval Holder submit the licence application as soon as possible, to ensure the application is processed and issued before the TLO period expires.
tonnage of each shipment.		The department also recommends the Works Approval Holder pays special attention to Condition 6 of the works approval which requires the Works Approval Holder to submit the Environmental Commissioning Report within 30 calendar days from the completion date of the third authorised shipment under the environmental commissioning phase. It is in the Works Approval Holders best interest to submit this report as soon as possible, preferably within the first 12 days, so that the fourth shipment can commence in compliance under time limited operations.
Works Approval Holder to provide detail on management actions taken if	Iron Ore materials to be transported and handled during Port operations have to be properly managed both to minimise risk to health and to avoid environmental impact on the surrounding community.	Acknowledged. Table 1 (proposed Applicant controls) updated.
ron ore product is found to contain hazardous levels of respirable crystalline silica or	The Safety Data Sheets provided with the application classifies the lumps and fines as non- hazardous according to GHS Classifications and is not toxic. The iron ore product contains	

DWER information request	Summary of applicant's comment	Department's response
asbestos mineral fibre. management actions to include details on disposal	trace levels of respirable crystalline silica (CAS 14808-60-7) and asbestos mineral fibre. Therefore, the health and environmental impact due to the transport and handling of Iron Ore materials during port activities may be considered not significant.	
methods when hazardous material is spilt on the wharf	MITIGATION MEASURES	
during loading activities	Handling of all Iron Ore Material will be carried out by properly trained workers and supervisors. No handling will be allowed prior to undertaking the appropriate training or induction session.	
	Where spills or leaks can happen, storing area will be designed taking into account this environmental risk. In case a minor spill takes place while handling, action will be taken by using remediate spill kits available, always following MSDS recommendations while dealing with the chemicals and using proper PPE as required. The source shall be isolated as soon as possible and affected area contained immediately to avoid bigger impact. Further detailed response action shall be performed as per Hazardous Substances Procedure.	

## Table 6: Comments on draft works approval and decision report sent 23 June 2022 (second revision)

DWER information request	Summary of applicant's comment	Department's response
Applicant to revise 50ug/m <sup>3</sup> trigger value target for dust monitors. The issue with the 50ug/m <sup>3</sup> trigger level is that it is from the National Environmental Protection Measure (NEPM) which is based on impacts to residential/community receptors, which are not close to the Port site. As the monitors will be located in an active industry area away from residential receptors, a higher trigger value may be more suitable if it can be justified based on risk.	Applicant email response received 14 July 2022: 'After some discussion with the Supplier and after some homework, we believe we could raise the alert trigger point to 80ug/m <sup>3</sup> . We would like to stress that currently there is very little public data around trigger levels (ie our Supplier have not install Dust Monitors in the area before), so there is a bit of reluctance to set a firm trigger value. Can we please issue the works approval based on with the 80ug/m <sup>3</sup> trigger level, with a review during the time limited operations (TLO) and licence drafting phase to ensure that is trigger alert level is fit for purpose. We can then set the final licence limit (XXug/m3) based on the monitoring data from the TLO.'	Department accepts the revised trigger value. Works approval and decision report updated for final issuing.

# Appendix 2: Application validation summary

SECTION 1: APPLICATION SUMMARY (as updated from validation checklist)							
Application type							
Works approval	$\boxtimes$						
		Relevant works approval number:			None	$\boxtimes$	
		Has the works approva with?	al been complied	Yes	s 🗆 No		
Licence		Has time limited operative works approval demon	tions under the strated ?	Ye	s 🗆 No	□ N/A □	
		Environmental Complia Critical Containment In Report submitted?	ance Report / frastructure	Yes 🗆 No 🗆			
		Date report received:					
Renewal		Current licence number:					
Amendment to works approval		Current works approval number:					
Amendment to licence		Current licence number:					
		Relevant works approval number:			N/A		
Registration		Current works approval number:			None		
Date application received		14 October 2021					
Applicant and premises details							
Applicant name/s (full legal name/s)		Paulsens East Iron Ore Pty Ltd (ABN: 96 643 291 230)					
Premises name		Port of Ashburton					
		Ashburton Cargo Wharf (eastern berth or southern berth) Part of Lot Number: 569 (Deposited Plan 71345) Reserve Number: 51074 (Pilbara Port Authority)					
		Eastern Berth EB1 294086E 7600902N					
		Eastern Berth EB2 294160E 7600902N					
Premises location		Eastern Berth EB3 29415	59E 7600732N				
		Eastern Berth EB4 294086E 7600732N					
	Southern Berth SB1 293879E 7600772N						
	Southern Berth SB2 294128E 7600672N						
	Southern Berth SB4 293878E 7600672N						
Local Government Authority	Shire of Ashburton						
Application documents							
HPCM file reference number:		DER2021/000591					

SECTION 1: APPLICATION SUMMARY (a	s updated from validation checklist)
Key application documents (additional to application form):	<ul> <li>The following documents are appended to application form:</li> <li><i>Pilbara Ports Authority written consent letter</i></li> <li><i>ABN lookup extract for PPA</i></li> <li><i>ASIC Search PPEIO</i></li> <li><i>Draft Environmental Management Plan</i></li> <li><i>Stakeholder Engagement Register</i></li> <li><i>Air Quality Assessment Report</i></li> <li><i>Modes of Flow</i></li> <li><i>Storage Plant Design</i></li> <li><i>SDS Micro analysis australia – fines and lumps</i></li> <li><i>OCT 2020 lump &amp; fines particle size distribution results performed by micro analysis for lump and fines product</i></li> <li><i>ALS elemental analysis for lump and fines product</i></li> <li><i>Results of Asbestos Analysis-Fines and Lumps-SEM</i></li> </ul>
Scope of application/assessment	
Summary of proposed activities or changes to existing operations.	<ul> <li>Paulsens East Iron Ore Pty Ltd (PEIO), a wholly owned subsidiary of Strike Resources, has submitted a works approval application to run a category 58 (bulk material loading/unloading) operation at Pilbara Port Authority's (PPA) multi-user berth the Ashburton Cargo Wharf (ACW), within the Port of Ashburton.</li> <li>The Port infrastructure is already established and PEIO do not hold an active licence for the area.</li> <li>During the iron ore export activities, PEIO will be granted operational control over either the southern or eastern berth at ACW and when export activities are complete, operational control will be transferred back to PPA.</li> <li>This operation is part of a the larger PEIO Project which will see the export of an estimated 6 million tonnes of iron ore product from PEIO mine over a four-year period.</li> <li><b>Operation</b></li> <li>The applicant has applied for a throughput of more than 5000 but not more than 10000 tonnes of bulk material per day and has estimated that up to 2 million tonnes per year of ore will be handled through AWC.</li> <li>Iron ore products will be delivered to the ACW in sealed Rotaboxes. The product will be transferred into a special purpose transshipment vessel. Empty Rota-boxes will then be loaded onto trucks and taken off Port land.</li> </ul>

#### **SECTION 1: APPLICATION SUMMARY (as updated from validation checklist)**

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)
Category 58: Bulk material loading or unloading: premises on which clinker, coal, ore, ore concentrate or any other bulk granular material (other than salt) is loaded onto or unloaded from vessels by an open materials loading system.	More than 5000 but not more than 10 000 tonnes per day	N/A

### Legislative context and other approvals

Has the applicant referred, or do they intend to refer, their proposal to the EPA under Part IV of the EP Act as a significant proposal?	Yes 🗆 No 🖂	Referral decision No: Managed under Part V □ Assessed under Part IV □
Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?	Yes ⊠ No □	Ministerial statement No: MS 1131 is held by Pilbara Ports Authority (PPA). The shipping channel, material offloading facility (MOF) and section of road within the Port of Ashburton that were constructed and commissioned by Chevron have been transferred to PPA who currently operate these facilities. EPA Report No: 1653
Has the proposal been referred and/or assessed under the EPBC Act?	Yes 🗆 No 🛛	Reference No:
Has the applicant demonstrated occupancy (proof of occupier status)?	Yes ⊠ No ⊠	Certificate of title □ General lease □ Expiry: Mining lease / tenement □ Expiry: Other evidence ⊠ Expiry: Letter from PPA giving PEIO consent to operate at Ashburton Cargo Wharf Southern Berth and ACW Eastern Berth, Area 1 and Area 2. Applicant notes that it is not possible to furnish an ASIC Company Extract for Pilbara Ports Authority, ABN 94 987 448 870 as it

SECTION 1: APPLICATION SUMMARY (as updated from validation checklist)			
		is a State Government Entity.	
		Current Company extract provided for Paulsens East Iron Ore Pty Ltd.	
Has the applicant obtained all relevant planning approvals?	Yes ⊠ No □ N/A ⊠	Approval: PPA holds a valid Ministerial Statement (MS 1131) under Part IV of the Environmental Protection Act. PEIO has an approved Mining Proposal (Doc ID: 8514474) and Mine Closure Plan (Doc ID:8465451) – cant find these documents on Minedex so will request their status in our stakeholder letter to DMIRS 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 🗆 No 🛛	CPS No: N/A Stakeholder letter to DMIRS to confirm PEIO's clearing approval for the off-site stockpile site.	
Has the applicant applied for, or have an existing CAWS Act clearing licence in relation to this proposal?	Yes 🗆 No 🖂	Application reference No: N/A Licence/permit No: N/A	
Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?	Yes 🗆 No 🖾	Application reference No: Licence/permit No: Licence / permit not required.	
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?	Yes □ No ⊠	Name: The Port is situated within the Pilbara Surface Water Proclamation Area.Type: Proclaimed Surface Water AreaHas Regulatory Services (Water) been consulted?Yes □ No □ N/A ⊠Regional office: Swan Avon / Mid- West Gascoyne / Kwinana Peel / North West / South West / Goldfields / South Coast	

SECTION 1: APPLICATION SUMMARY (as	s update	d from validation o	checklist)
Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?	Yes 🗆	No 🖂	Name: N/A Priority: P1 / P2 / P3 / N/A Are the proposed activities/ landuse compatible with the PDWSA (refer to <u>WQPN 25</u> )? Yes  No  N/A  N/A  Note: If the proposed activity is not listed as a compatible land use with the PDWSA please consult with the relevant regional office (Regulatory Services - Water) and Water Source Protection (Science and Planning).
Is the Premises subject to any other Acts or subsidiary regulations (e.g. Dangerous Goods Safety Act 2004, Environmental Protection (Controlled Waste) Regulations 2004, State Agreement Act xxxx)	Yes 🗵	No 🗆	Ministerial Statements PPA holds MS 1131 (EPA report 1653) which manages coastal process monitoring, mangrove monitoring, heritage protection and marine pests within the Port of Ashburton. Chevron owns and is responsible for their gas facility site and associated trunkline and shipping channel. Preceding ministerial statements relating to MS 1131 include MS 873 (approved Aug 2011) MS 903 (approved Jul 2012), MS 922 (approved Jan 2013) and MS 931 (approved Jan 2013). Chevron holds MS 873 (EPA report 1404) which was amended by MS 1131. <b>Commonwealth Legislation</b> Biosecurity Act 2015 EPBC Act 1999 NEPC (WA) Act 1996 Native Title Act 1993 <b>Commonwealth Government</b> <b>Guidelines</b> Dust Control – Best Practice in Environmental Management in Mining <b>EPA Guidance Statements</b> EPA guidance statement No. 1 Protection of Tropical Arid Zone Mangroves along the Pilbara Coastline) <b>WA Legislation</b> Port Authorities Act 1999 Shipping and Pilotage Act 1967 Marine and Harbours Act 1981 Agriculture and Related Resources Protection Act 1976 (WA) Dangerous Goods Safety Act 2004 (and associated Regulations - WA) EP Act 1986

SECTION 1: APPLICATION SUMMARY (as updated from validation checklist)			
		Mines Safety and Inspection Act 1994 Land Development Sites and Impacts on Air Quality Ambient Air Quality NEPM National Pollutant Inventory NEPM Rights in Water and Irrigation Act 1914 (WA) Biodiversity Conservation Act 2016 (and associated Regulations – WA)	
Is the Premises within an Environmental Protection Policy (EPP) Area?	Yes □ No ⊠		
Is the Premises subject to any EPP requirements?	Yes □ No ⊠		
Is the Premises a known or suspected contaminated site under the <i>Contaminated Sites Act 2003</i> ?	Yes □ No ⊠	If Yes include details here. Classification: N/A / possibly contaminated – investigation required (PC–IR) / not contaminated – unrestricted use (NC–UU) / contaminated – restricted use (C–RU) / remediated for restricted use (RRU) / contaminated – remediation required (C–RR) / decontaminated (Decon) Date of classification: N/A	