



MS775 Compliance Assessment Report – 2019-2020

Pardoo Direct Shipping Ore (DSO) Project

31/10/2020

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Revision 0



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Pardoo Direct Shipping Ore (DSO) Project

Authorisation

Revision	Reason for Issue	Prepared	Checked	Authorised	Date
0	Compliance	A. Slabber	T. Sprenkels	N. Bell	31/10/2020
		<i>A. Slabber</i>	<i>T. Sprenkels</i>	<i>N. Bell</i>	

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1 Introduction

The Atlas Iron Limited (Atlas) Pardoo Direct Shipping Ore (DSO) Project (the Project) is located in the Pilbara region of Western Australia, with the mine site situated approximately 70 km east of Port Hedland.

The Project was assessed through a Public Environmental Review (PER) under Part IV of the *Environmental Protection Act 1986* (EP Act) and approved under Ministerial Statement No. 775 (MS775) on 3 October 2008.

This Compliance Assessment Report (CAR) has been prepared to satisfy Ministerial condition 4 of MS775 for the Project, in accordance with the Office of Environmental Protection Authority's (OEPA's) Post Assessment Guideline No. 3 Preparing a Compliance Assessment Report (August 2012). The review period for this CAR is 3 October 2019 through to 2 October 2020.

2 Implementation Status

The Project commenced construction in October 2008, shipping first ore through Port Hedland in December 2008. The approved mining rate was 3 million tonnes per annum (Mtpa) in accordance with Schedule 1 - Attachment 4 to MS775. The Project ceased operations in 2014 following the mining of all economic ore reserves and remains in decommissioning.

3 Statement of Compliance

3.1 Proposal and Proponent Details

Proposal Title	PARDOO IRON ORE MINE & DIRECT SHIPPING FROM PORT HEDLAND SHIRE OF EAST PILBARA & TOWN OF PORT HEDLAND
Statement Number	MS775
Proponent Name	Atlas Iron Pty Ltd
Proponent's Australian Company Number	ABN 63 110 396 168

3.2 Statement of Compliance Details

Reporting Period	October 2019 - October 2020.
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Implementation phase(s) during reporting period (please tick <input type="checkbox"/> relevant phase(s))							
Pre-construction	<input type="checkbox"/>	Construction	<input type="checkbox"/>	Operation	<input type="checkbox"/>	Decommissioning	<input checked="" type="checkbox"/>



Audit Table for Statement addressed in this Statement of Compliance is provided at Attachment: 1

The audit table has been prepared and maintained in accordance with the Department of Water and Environmental Regulation (DWER) Post Assessment Guideline for Preparing an Audit Table, as amended from time to time. The 'Status Column' of the audit table accurately describes the compliance status of each implementation condition and/or procedure for the reporting period of this Statement of Compliance.

Were all implementation conditions and/or procedures of the Statement complied with within the reporting period? (please tick the appropriate box)

No (please proceed to Section 3)	✓	Yes (please proceed to Section 4)
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3.3 Details of Non-compliance(s) and/or Potential Non-compliance(s)

3.3.1 Which implementation condition or procedure was non-compliant or potentially non-compliant?

MS 775 Condition 10-2:
 Re-establishment of vegetation in the rehabilitation area to be comparable with that of the pre-mining vegetation such that the following criteria are met within four years* following the cessation of productive mining:
 (1) Flora and vegetation are re-established with not less than 70 percent coverage (not including weed species); and
 (2) Weed coverage less than 10 percent.
 * 2018 - As Project ceased operations in 2014.

3.3.2 Was the implementation condition or procedure non-compliant or potentially non-compliant?

Non-Compliant

3.3.3 On what date(s) did the non-compliance or potential non-compliance occur (if applicable)?

2017-2018 reporting period

3.3.4 Was this non-compliance or potential non-compliance reported to the Chief Executive Officer, DWER?

YES: <input type="checkbox"/> Reported to DWER verbally	Date _____	NO:
✓ Reported to DWER in writing	Date 23/10/2018	

3.3.5 What are the details of the non-compliance or potential non-compliance and where relevant, the extent of and impacts associated with the non-compliance or potential non-compliance?

In 2018-2019 monitoring period Atlas reported non-compliance with this condition. Monitoring during the 2019-2020 period confirms that Atlas still fails to meet criteria 1 and 2 of condition 10.2.

 However, following a meeting with DWER on 27 March 2019 to discuss this non-compliance, DWER issued a clarification letter on 4 September 2019 (DWER-000163). This letter notified Atlas that the DWER considers the implementation of Atlas Pardoo DSO Project Mine Closure Plan (May 2013) to be appropriate in meeting the EPA's objectives for Rehabilitation and Mine Closure, and that the

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closure criteria in this plan can be considered in lieu of Condition 10-2 of Ministerial Statement 775. DWER noted the desert and low rainfall characteristics of the region in which the project is located, which makes a vegetation coverage target of 70% difficult to achieve.

This Mine Closure Plan applies following rehabilitation criteria:

- 1) Vegetation coverage criterion for plant cover values to reach $\geq 70\%$ of pre-mining vegetation cover within four years, and in the cases where this was not achieved, a contingency criterion of 70% of best-achievable perennial vegetation cover within ten years is applied.
- 2) Weed cover values to be less than 10% within four years, with a contingency criterion for weed taxa to not be dominant (weed cover is less than total native perennial vegetation cover) in rehabilitation areas within ten years.

In 2019 (Year 5), 11 of the 23 rehabilitation transects met completion criterion (1) for total native perennial vegetation cover. Vegetation cover increased at 20 of the 23 transects, with general increasing trends since monitoring began. A single monitoring location (i.e., sloped and flat transect PDO07 on the Bobby WRL) performed worse, with no native vegetation and higher cover of Buffel grass and weeds. This transect therefore also failed to meet criterion (2). The remaining 22 transects met criterion (2).

3.3.6 What is the precise location where the non-compliance or potential non-compliance occurred (if applicable)? (please provide this information as a map or GIS co-ordinates)

Monitoring locations as described in Attachment 2 Pardoo 2019 Rehabilitation Monitoring Assessment (Stantec, 2019)

3.3.7 What was the cause(s) of the non-compliance or potential non-compliance?

Criterion set in Condition 10-2 are unachievable and DWER have accepted alternative criterion as established in the current mine Closure Plan (refer to DWER consultation discussed in Section 3.3.5). Limited vegetation cover in certain rehabilitation areas at Pardoo are likely due to the following causes:

- Limited availability of viable topsoil pre mining.
- Climate - the Eremaean Botanical Province is regarded as desert due to the low and erratic rainfall.

Excessive weed cover in certain rehabilitation areas at Pardoo are likely due to the following causes:

- Pre and post-mining land use (i.e. cattle movements).
- Presence of colonising weed species.

3.3.8 What remedial and/or corrective action(s), if any, were taken or are proposed to be taken in response to the non-compliance or potential non-compliance?

During the October 2018 – October 2019 reporting period Atlas commissioned Astron to conduct weed control at Pardoo (July 2019), three months after the (Stantec 2019) rehabilitation and weed assessment.

During the October 2019 – October 2020 reporting period Atlas commissioned Pilbara Environmental to conduct extensive weed control at Pardoo (March 2020). The weed campaign targeted species such as *Calotropis procera*, which were most common on the Bobby WRL and Kapok Bush in areas where it has not fully established, to prevent further spreading.

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Another round of weed control is scheduled to be completed in 2021, following the wet season.

The application of native seed in order to encourage increased native vegetation establishment in underperforming monitoring transects will be considered following monitoring in 2021.

3.3.9 What measures, if any, were in place to prevent the non-compliance or potential non-compliance before it occurred? What, if any, amendments have been made to those measures to prevent re-occurrence?

Criterion set in Condition 10-2 are unachievable and DWER have accepted alternative criterion as established in the current mine Closure Plan (refer to DWER consultation discussed in Section 3.3.5).

As this non-compliance relates to rehabilitation performance, there is no risk of reoccurrence rather the risk is that rehabilitation criteria are not met with time/age. Lessons learnt at Pardoo are however, being considered in development of MCPs at Atlas other Projects.

3.3.10 Supporting Information/documentation collected and recorded in relation to this implementation condition or procedure

Attachment 1: Compliance Details Table

Attachment 2: Pardoo 2019 Rehabilitation Monitoring Assessment (Stantec, 2019)

Attachment 3: Pardoo 2019 Weed Assessment (Stantec, 2019)

Attachment 4: Atlas Iron Weed Management Report (Pilbara Environmental, 2020)

Attachment 5: Draft Pardoo Landform Erosion Assessment (Mine Earth, 2020)

Attachment 6: Statement 775 Letter to Atlas Rehabilitation of Pardoo 4 (September 2019)

3.4 Proponent Declaration

I, Natassja Bell, A/Manager – Environment and Approvals, declare that I am authorised on behalf of Atlas iron Pty Limited (being the person responsible for the proposal) to submit this form and that the information contained in this form is true and not misleading.

Signature:



Date: 31/10/2020

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Attachment 1: Compliance Details

This audit table is a summary and timetable of conditions and commitments applying to this Project. Refer to the Minister's Statement for full detail/precise wording of individual elements.

Abbreviations: CAR = Compliance Assessment Report; CEO = Chief Executive Officer of OEPA; DEC = Department of Environment and Conservation (DEC); DER = Department of Environment Regulation; DIA = Department of Indigenous Affairs; DMP = Department of Mining and Petroleum; DoH = Department of Health; DoW = Department of Water, EPA = Environmental Protection Authority, Minister for Env = Minister for the Environment; OEPA = Office of the Environmental Protection Authority.

Compliance Status: C = Compliant, CLD = Completed, NC = Non – compliant, NR = Not Required at this stage. Please note the terms NA = Not Audited and VR = Verification Required are only for OEPA use. IP = In Process may only be used by the proponent in circumstances outlined in Section 2.8 of the Post Assessment Guideline for Preparing an Audit Table.

Audit Code	Subject	Requirement	Status	Further information
4-1	Compliance Reporting	Submit environmental compliance reports to the CEO of the DEC annually, reporting on the previous twelve months unless required by the CEO of DEC to report more frequently.	C	A CAR shall be submitted on or before Oct 31 each year and address requirements as appropriate. This report serves as the CAR for reporting period October 2019 - October 2020.
7-1	Flora and Vegetation	In implementing the proposal, the proponent shall ensure that priority flora outside the pit infrastructure areas shown in Figure 1 of Schedule 1 are not impacted by the proposal	CLD	Atlas commissioned Woodman Environmental to monitor priority flora populations adjacent to operational areas from 2009-2014. The monitoring was conducted again in 2017 to identify any continuing impacts on priority flora (post mining). The results demonstrate no impact to priority flora with no future impacts predicted.

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7-2	Flora and Vegetation	In implementing the proposal, the proponent shall ensure that no more than 10% of priority flora within the two dewater discharge saturation zones of 14 and 10 hectares is lost.	CLD	No priority flora were recorded within the dewater discharge saturation zones in 2014, 2017 or 2019 monitoring.
7-3		The proponent shall monitor, in liaison with the Department of Environment and Conservation, priority flora and vegetation in the proposal area and down gradient of dewatering discharge to detect any impact of the proposal on priority flora species and vegetation. This monitoring is to be carried out to the satisfaction of the CEO of the Department of Environment and Conservation.	CLD	Vegetation monitoring was undertaken by Woodman Environmental from 2008-2014, 2017 and 2019.
7-4		The proponent shall submit the results of monitoring referred to in condition 7-3 to the CEO of the Department of Environment and Conservation at times determined by the CEO of the Department of Environment and Conservation.	CLD	The last Pardoo DSO Project Environmental Discharge Vegetation Health Monitoring Report (Woodman, 2019) was submitted to the CEO on 22/10/2019.
7-5		The proponent shall immediately provide proposed management measures to the CEO of the Department of Environment and Conservation in the event that the requirements of condition 7-1 and 7-2 are not met or are not likely to be met.	CLD	No action required as Condition 7-1 and 7-2 have been met. Priority flora has been discontinued as the intent of the conditions have been met and no future impacts are predicted

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Audit Code	Subject	Requirement	Status	Further information
9-1	Aboriginal Heritage	Prepare an Aboriginal Cultural Heritage Management Plan that meets the objectives specified in this condition.	CLD	Aboriginal Cultural Heritage Management Plan (ACHMP) submitted and approved.
9-2		Consult with the Department of Indigenous Affairs (DIA) in the preparation of the Aboriginal Cultural Heritage Management Plan.	CLD	ACHMP implemented.
9-3		Ensure that changes to the biological and physical environment arising from the implementation of the proposal do not adversely affect Aboriginal cultural heritage values, through: 1. Identify Aboriginal heritage sites. 2. Identify potential impacts. 3. Identify and implement appropriate management measures in consultation with the Ngarla People. 4. Inform all project stakeholders of their obligations.	CLD	ACHMP implemented.
9-4		Implement the Aboriginal Cultural Heritage Management Plan.	CLD	ACHMP implemented. Atlas completed heritage surveys prior to any disturbance and maintains a geospatial database of heritage sites.
10-1	Closure / Decommission and Rehabilitation	Conduct surveys of the proposal area to collect baseline information on pre-mining soil profiles prior to the commencement of productive mining.	CLD	Conducted prior to mining commencing.

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10-2	Closure / Decommission and Rehabilitation	<p>Commence rehabilitation of the mine site area as the mining progresses, in accordance with the following:</p> <p>1. Re-establishment of vegetation in the rehabilitation area to be comparable with that of the pre-mining vegetation such that the following criteria are met within four years following the cessation of productive mining:</p> <p>(1) Flora and vegetation are re-established with not less than 70 percent coverage (not including weed species); and</p> <p>(2) Weed coverage less than 10 percent.</p>	NC	<p>In 2018-2019 monitoring period Atlas reported non-compliance with this condition. Monitoring during the 2019-2020 period confirms that Atlas still fails to meet criteria 1 and 2 of condition 10-2.</p> <p>However, following a meeting with DWER on 27 March 2019 to discuss this non-compliance, DWER issued a clarification letter on 4 September 2019 (DWER-000163). This letter notified Atlas that the DWER considers the implementation of Atlas Pardoo DSO Project Mine Closure Plan (May 2013) to be appropriate in meeting the EPA's objectives for Rehabilitation and Mine Closure, and that the closure criteria in this plan can be considered in lieu of Condition 10-2 of Ministerial Statement 775. DWER noted the desert and low rainfall characteristics of the region in which the project is located, which makes a vegetation coverage target of 70% difficult to achieve.</p> <p>This Mine Closure Plan applies following rehabilitation criteria:</p> <p>1) Vegetation coverage criterion for plant cover values to reach $\geq 70\%$ of pre-mining vegetation cover within four years, and in the cases where this was not achieved, a contingency criterion of 70% of best-achievable perennial vegetation cover within ten years is applied.</p> <p>2) Weed cover values to be less than 10% within four years, with a contingency</p>
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Audit Code	Subject	Requirement	Status	Further information
		2. A schedule of rate of rehabilitation acceptable to the CEO of the DEC.	C	<p>criterion for weed taxa to not be dominant (weed cover is less than total native perennial vegetation cover) in rehabilitation areas within ten years.</p> <p>In 2019 (Year 5), 11 of the 23 rehabilitation transects met revised completion criterion (1) for total native perennial vegetation cover. Vegetation cover increased at 20 of the 23 transects, with general increasing trends since monitoring began. A single monitoring location (i.e., sloped and flat transect PDO07 on the Bobby WRL) performed worse, with no native vegetation and higher cover of Buffel grass and weeds. This transect therefore also failed to meet criterion (2). The remaining 22 transects met criterion (2).</p> <p>Pilbara Environmental was commissioned to conduct weed control at Pardoo in March 2020.</p> <p>A schedule of rate of rehabilitation has been included in the MCP (Table 44), accepted by DMP (Reg: 39884) and OEPA.</p>
10-3		Ensure that the final pit lakes do not cause significant environmental impacts arising from groundwater pollution or through attracting native fauna which may subsequently be harmed or fauna which may harm surrounding native vegetation.	C	Nominated groundwater bores and pit lakes are sampled in accordance with the approved Mine Closure Plan. Results are included in the Annual Aquifer Report submitted to the DWER.

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Audit Code	Subject	Requirement	Status	Further information
10-4		In liaison with the DEC, monitor progressively the performance of rehabilitation against the criteria in 10-2 based on annual reporting.	C	<p>Abandonment bunds have been constructed around all open pits to prevent fauna entering the lakes.</p> <p>Stantec Australia (formerly MWH Australia) conducted rehabilitation monitoring at Pardoo in April 2016, April 2017, April 2018 and April 2019. The monitoring included an assessment of rehabilitation against completion criteria for vegetation, surface water (erosion), weeds and quoll habitat.</p> <p>Mine Earth assessed the erosion status of the rehabilitation at Pardoo in June 2020 using drone captured orthophotos and digital elevation model (DEM) data to identify and quantify the volumes and spatial attributes of erosion gullies. DWER were also consulted in 2019 on rehabilitation performance as discussed above against Condition 10-2.</p>
10-5		Submit annually a report of the rehabilitation performance monitoring required by condition 10.4 to the CEO of DEC.	C	<p>The Pardoo 2019 Rehabilitation Monitoring Assessment (Stantec, 2019), Pardoo 2019 Weed Assessment (Stantec, 2019), Atlas Iron Weed Management Report (Pilbara Environmental 2020) and Pardoo Landform Erosion Assessment (Mine Earth 2020) are provided as Attachment 2, 3, 4 and 5.</p>



Attachment 2 Pardoo 2019 Rehabilitation Monitoring Assessment (Stantec, 2019)



Attachment 3 Pardoo 2019 Weed Assessment (Stantec, 2019)



Attachment 4 Atlas Iron Weed Management Report (Pilbara Environmental 2020)



**Attachment 5 DRAFT Pardoo Landform Erosion
Assessment (Mine Earth 2020)**



Attachment 6 Statement 775 Letter to Atlas Rehabilitation of Pardoo (4 September 2019)