

Statement No.

#### MINISTER FOR THE ENVIRONMENT; LABOUR RELATIONS

000523

#### STATEMENT TO AMEND CONDITIONS APPLYING TO A PROPOSAL (PURSUANT TO THE PROVISIONS OF SECTION 46 OF THE ENVIRONMENTAL PROTECTION ACT 1986)

#### YANDICOOGINA IRON ORE MINE & RAILWAY 90 KILOMETRES NORTH-WEST OF NEWMAN HAMERSLEY RANGE

**Proposal:** The Yandicoogina Iron Ore Mine and Railway is located approximately 90 kilometres north-west of the town of Newman.

The proposal involves the construction and operation of an open cut iron ore mine; facilities to crush and screen ore and convey it to the rail loadout facility; and a 90 kilometre rail section which connects the mine to the Central Pilbara Railway.

Proponent: Hamersley Iron Pty Limited

Proponent Address: 152-158 St George's Terrace, Perth WA 6000

Assessment Number: 1174

Previous Assessment Number: 979

Previous Statement Number: Statement No. 417 (published on 27 May 1996)

Report of the Environmental Protection Authority: Bulletin 946

Previous Reports of the Environmental Protection Authority: Bulletin 809, April 1996

The implementation of this proposal is subject to the conditions and procedures contained in Ministerial Statement No. 417 (May 1996), as amended by the following conditions and procedures:

Condition 1 of Statement No. 417 is deleted and the following conditions are inserted:

#### **1 Proponent Commitments**

- 1-1 The proponent shall implement the consolidated environmental management commitments of April 1996 as amended on 12 July 1999 and documented in schedules 2 and 3 of this statement.
- 1-2 The proponent shall implement environmental management commitments which the proponent makes or has made as part of the fulfilment of conditions and procedures in this and the previous statement issued for this proposal.

Published on

- 1 OCT 1999

#### Condition 2 of Statement No. 417 is deleted and the following conditions are inserted:

#### 2 Implementation

- 2-1 Subject to these conditions and procedures, the proponent shall implement the proposal as documented in schedule 1 of this statement.
- 2-2 Where the proponent seeks to change any aspect of the proposal as documented in schedule 1 of this statement in any way that the Minister for the Environment determines, on advice of the Environmental Protection Authority, is substantial, the proponent shall refer the matter to the Environmental Protection Authority.
- 2-3 Where the proponent seeks to change any aspect of the proposal as documented in schedule 1 of this statement in any way that the Minister for the Environment determines, on advice of the Environmental Protection Authority, is not substantial, those changes may be effected.

The following conditions are inserted after Condition 7 of Statement No. 417:

#### 8 Environmental Management System

- 8-1 In order to manage the environmental impacts of the project, and to fulfil the requirements of the conditions and procedures in this statement, prior to mining within the extended mining area, the proponent shall demonstrate to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection that there is in place an environmental management system which includes the following elements:
  - 1 An environmental policy and corporate commitment to it;
  - 2 Mechanisms and processes to ensure:
    - (1) planning to meet environmental requirements;
    - (2) implementation and operation of actions to meet environmental requirements;
    - (3) measurement and evaluation of environmental performance; and
  - 3 Review and improvement of environmental outcomes.
- 8-2 The proponent shall implement the environmental management system referred to in condition 8-1.

CHERXL/EDWARDES (Mrs) MLA MINISTER FOR THE ENVIRONMENT - 1 OCT 1999

# Schedule 1

### Proposal (979/1174)

The Yandicoogina Iron Ore Mine and Railway (also known as "Yandi (HIY) Project") is located approximately 90 kilometres north-west of the town of Newman.

The proposal involves the construction and operation of:

- an open cut iron ore mine;
- facilities to crush and screen ore and convey it to the rail loadout facility; and
- a 90 kilometre rail section which connects the mine to the Central Pilbara Railway.

Table 1 summarises the key characteristics of the project - the initial mining area and the mining area extension.

## Table 1: Key project characteristics

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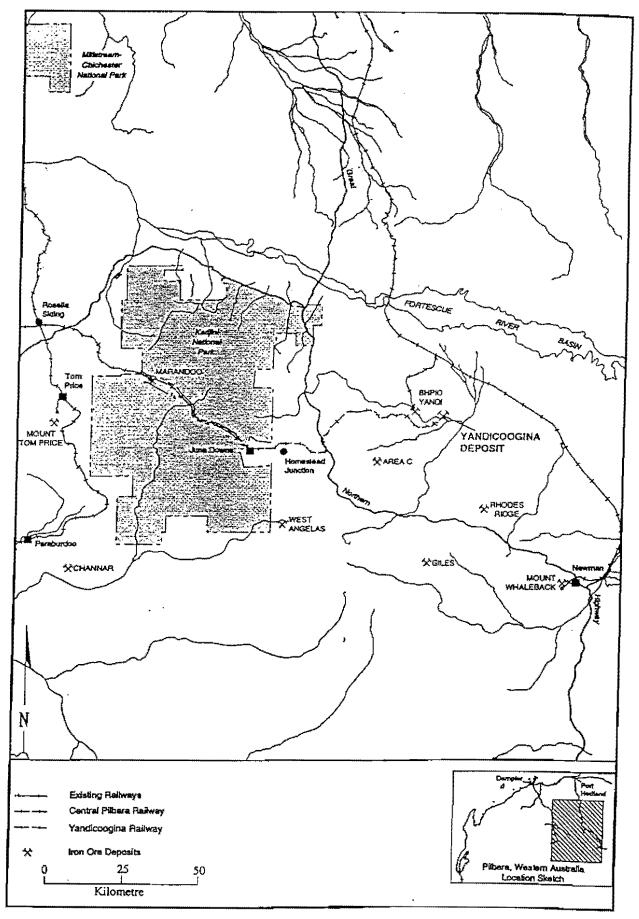
Aspect	Project (initial mining area)	Mining Area Extension	Variation from Project (initial mining area)
Length of CID to be mined	SL12.2km to SL15.0km	SL15.0km to a point 750m beyond SL19.0km (equivalent to 19.75km)	Additional 4.75km
Area of CID to be mined	300ha	300ha	Additional 300ha
Initial mining rate	About 8Mt/a, increasing to design capacity of 15Mt/a	About 15Mt/a, maintaining design capacity	No change
Ore reserve to be mined	140 <b>M</b> t	160Mt, bringing total to 300Mt	Additional 160Mt
Estimated mine life	15-20 years	25-30 years	Additional 10-15 years
Mine pit profile	About 65m deep; 40m below pre-mine watertable	About 65m deep; 40m below pre- mine watertable	No change
Dewatering requirements	Initial: 30ML/d Maintenance: 10-15ML/d	Initial: 15-20ML/d Maintenance: 10-15ML/d	Initial - lower Maintenance - same
Volume of dewatering used	5ML/d	5ML/d	No change
Number of dewatering borefields	<ul><li>Two:</li><li>a Permanent borefield</li><li>a Sacrificial borefield</li></ul>	<ul> <li>Three:</li> <li>an existing Permanent borefield</li> <li>a new Permanent borefield on Phils Creek CID</li> <li>a new Sacrificial borefield in the main CID</li> </ul>	An additional Permanent borefield and a replacement Sacrificial borefield in the CID
Proportion of waste material backfilled (versus out-of-pit)	100% (after first three years, all waste reports as backfill, with out-of-pit waste used as backfill upon mine closure)	100% (waste reports as backfill from commencement of mining or is stockpiled and returned as backfill later)	No change
Proportion of mine void to be filled with overburden	About 50%	About 50%	No change
Mine infrastructure requirements	Refer CER (1995) and Section 1.2 and Figure 1.2 of the Section 46 Environmental Review document.	Utilise existing infrastructure until additional ore processing plant (or re- location of existing one) needed. Some new haul roads also.	Additional or re- located ore processing plant. More haul roads.

#### Abbreviations:

- CID Channel Iron Deposit
- ha hectares
- ML/d megalitres per day
- Mt/a million tonnes per annum
- SL drill Section Line

## Figures

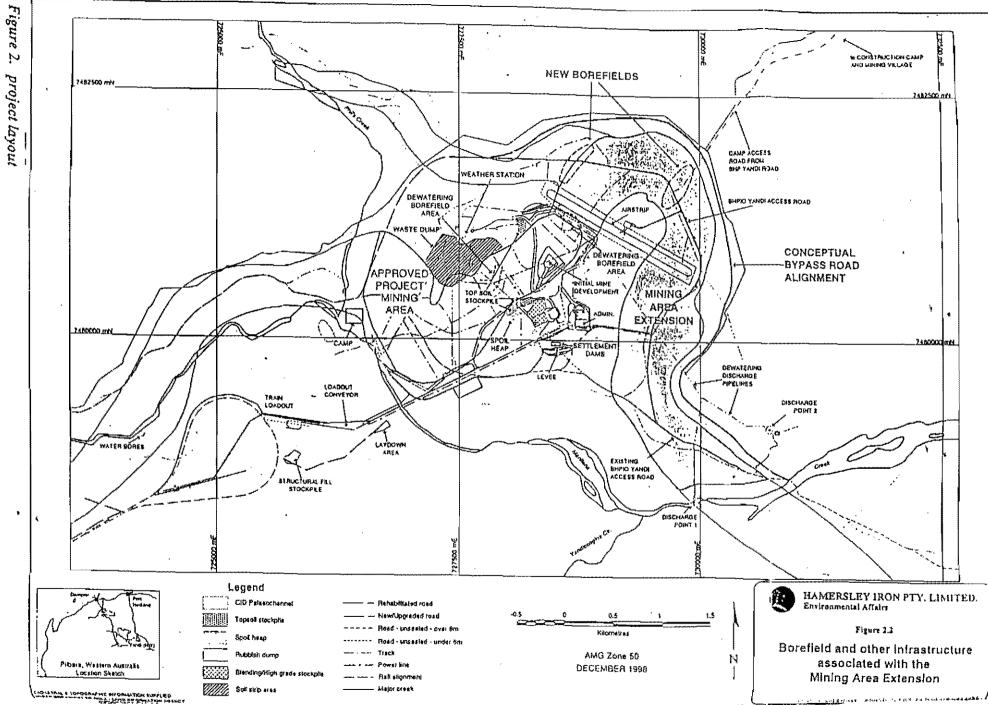
Figure 1 - Location plan. Figure 2 - Project layout map.



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Figure I. Location plan





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Schedule 2

# Proponent's Environmental Management Commitments April 1996

# Yandicoogina Iron Ore Mine & Railway 90 Kilometres north-west of Newman Hamersley Range (979/1174)

Hamersley Iron Pty Limited

ISSUE	OBJECTIVE	COMMIT -MENT NUMBER	COMMITMENT	Phase
Legislation	Comply with relevant legislation.	1	The construction and operation of the project will be undertaken in accordance with the requirements of relevant Commonwealth and State legislation and regulations.	Pre-construction and Post-commissioning.
Amendments to the project	Refer significant project amendments for assessment.	2	Details of any plan to alter the project from that outlined in the CER that is likely to result in significant environmental impacts will be provided to the EPA for environmental assessment.	Pre-construction and Post-commissioning.
Understanding hydrogeological system	Understand hydrogeological systems and develop and evaluate options for long term management.	3	Hamersley will continue to evaluate the impacts of mining and decommissioning on Marillana Creek and the CID jointly with BHPIO for the purposes of further understanding the hydrogeological system in order to develop and evaluate options for viable and compatible long term management strategies. Results of evaluations will be reported to the Pilbara Iron Ore Environmental Management Committee.	Pre-construction, Construction and Post-commissioning.
Groundwater monitoring in Marillana Creek	Monitor groundwater in the Marillana Creek alluvium.	5 6 7	Hamersley will establish groundwater monitoring bores in the alluvium to monitor surface and groundwater levels before dewatering commences. The results of this monitoring will be submitted to the State on an annual basis. The monitoring programme will be implemented to the satisfaction of the Minister for the Environment on advice from DEP.	Pre-construction, Construction and Post-commissioning.

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Hydrogeological data collection	Collect further hydrogeological data to develop a model for the final void.	8	Hamersley will continue to collect necessary hydrogeological data for the development of a model to predict long term water levels and quality in the final void.	Pre-construction, Construction and Post-commissioning.
		9	This model will be applied to assist design the final void to minimize long term impacts of mining on local and regional groundwater resources to the satisfaction of the Minister for the Environment on advice of DEP.	
		10	A report on this model and the final outcome will be prepared and submitted to the DEP before finalising the decommissioning plan.	
Environmental Audits	Conduct regular environmental reviews.	11	Hamersley will conduct internal environmental reviews during the construction (every 6 months) and operation (annually) of the project.	Pre-construction, Construction and Post-commissioning.
		12	These environmental reviews will assess compliance with project commitments, relevant Works Approval and Operating Licence conditions and any other environmental requirements.	
Environmental Reporting	Prepare reports on environmental management and monitoring.	13	Annual and triennial reports that describe the actions taken to comply with environmental management conditions and monitoring commitments will be prepared by Hamersley and issued to the State.	Post-commissioning.

Environmental Management Programme (EMP)	Prepare an EMP for the construction and operation of the project.	14	<ul> <li>Hamersley will submit and implement an EMP for the project prior to the commencement of major construction activities. The EMP will be developed in consultation with the DEP, and to the satisfaction of the Minister for the Environment. The EMP will provide details on the following:</li> <li>1 groundwater and surface water management during mining and post-mining</li> <li>2 sheet and gully drainage management along the railway</li> <li>3 dust and noise emissions</li> <li>4 waste management</li> <li>5 flora and fauna protection</li> <li>6 fire and weed management</li> <li>7 environmental inductions for construction and operation personnel</li> <li>8 rehabilitation of disturbed areas, and</li> <li>9 monitoring programmes.</li> </ul>	Pre-construction and Post-commissioning.
Biological	Minimise impacts on riverine vegetation.	15 16 17	During the project life, Hamersley will undertake monitoring to assess the impacts of dewatering on riverine vegetation. If unacceptable impacts are detected, management strategies for the riverine vegetation will be implemented to the satisfaction of the Minister for the Environment on advice from DEP. The results of this monitoring and management will be	Pre-construction, Construction and Post-commissioning.
			submitted to the State on a triennial basis.	
Waste Disposal	Manage wastes in an appropriate manner.	18 19	Burning will not be permitted as a means of rubbish or other waste disposal within the project area. All putrescible, biodegradable, inert substances and other general rubbish will be disposed of in a fenced, excavated waste pit that will be regularly backfilled to cover the waste material.	Post-commissioning.

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Sewage Treatment Plants	Ensure sewage treatment plants are approved.	20	Plans for sewage treatment plants proposed at Yandicoogina will be submitted by Hamersley for approval by the Western Australian Department of Health.	Pre-construction.
Hydrocarbons	Appropriate storage of hydrocarbons.	21	All bunding for hydrocarbon storage areas will be constructed in accordance with the requirements of AS1940 - 1993.	Construction and Post-commissioning.
Contaminated Surface Runoff	Ensure that contaminated surface runoff does not enter natural drainage.	22	Management procedures will be put in place to ensure that stormwater runoff from areas that may result in contamination by hydrocarbons does not enter natural drainage channels without prior treatment.	Post-commissioning.
Dust	Minimise dust.	23	Dust suppression measures, including application of water from tankers, will be implemented to minimise dust generation during site preparation and construction activities.	Construction and Post-commissioning.
Pastoral Activities	Minimise potential disruption to pastoral activities.	24	Hamersley will enter into negotiations with the Marillana pastoral station manager on the issue of means of managing any potential disruptions to pastoral activities.	Pre-construction, Construction and Post-commissioning.
Archaeological and Ethnographic Sites in Railway Corridor	Obtain archaeological and ethnographic clearance for the railway corridor.	25	Once suitable access has been established, Aboriginal people involved in the earlier site survey process with Hamersley will be invited to inspect the route of the surveyed railway alignment to identify any significant archaeological or ethnographic sites.	Pre-construction.
Disturbance to Aboriginal Sites	Comply with <i>Aboriginal Heritage Act</i> .	26	If any Aboriginal site is required to be disturbed, a written application, as required under Section 18 of the <i>Aboriginal</i> <i>Heritage Act</i> , will be made to the Trustees of the Western Australian Museum for consent by the Minister for Aboriginal Affairs.	Pre-construction and Construction.
Rehabilitation	Ensure disturbed areas are rehabilitated.	27	Vegetation and topsoil removed during site preparation will be used to progressively rehabilitate disturbed areas.	Construction and Post-commissioning.

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Decommissioning		28	A conceptual decommissioning plan will be prepared in	Post-commissioning.
Plan	decommissioning of the project.		consultation with DEP, DOME, and the Water and Rivers Commission to the satisfaction of the Minister for the	
	project.		Environment for subsequent implementation.	
		29	The plan will be submitted to Government at least two years prior to decommissioning of the project.	
		30	The plan will address post-mining water management issues giving due consideration to the known results of environmental management at other mines on the channel iron deposit.	

**Schedule 3** 

# Proponent's Additional Environmental Management Commitments

12 July 1999

# Yandicoogina Iron Ore Mine & Railway 90 Kilometres north-west of Newman Hamersley Range (979/1174)

Hamersley Iron Pty Limited

No.	Issue	Objective	Action	Phase	Require- ments (Advice)
31	Environmental Management Programme (EMP)	To manage environmental impacts of the mining area extension.	Review and revise where relevant the Environmental Management Programme for the Project for the purpose of extending the environmental management and monitoring to address issues arising from the mining area extension.	Pre-mining (of mining area extension)	DEP (WRC, DME, and CALM)
32	Decommissioning and rehabilitation plan	To satisfactorily decommission the mine site and rehabilitate the site and its environs.	Prepare a conceptual decommissioning and rehabilitation plan covering all infrastructure associated with the Yandi (HIY) Project area. The plan will incorporate the initial mining area and the mining area extension.	Pre-mining (of the mining area extension) — within six months of the mining area extension being approved	DEP (DME and WRC)
33	Aboriginal heritage (archaeological) sites	To identify any archaeological sites	Involve the Gumala Aboriginal Corporation in a detailed archaeological survey to identify any sites within the areas to be disturbed. The findings of this survey shall be reported to the Aboriginal Affairs Department.	Pre-mining (of mining area extension)	DEP (AAD)

#### Abbreviations:

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- AAD Aboriginal Affairs Department
- Department of Conservation and Land Management CALM
- DEP Department of Environmental Protection
- Department of Minerals and Energy Water and Rivers Commission DME
- WRC

#### Attachment to Statement 523, change to definition of proposal

Proposal: Yandicoogina Iron Ore Mine and Railway

Change: expand existing waste rock dump area by 38ha in a crescent shaped area to the north and northeast; develop a new waste rock dump to the east of the current pit with an area of 22ha, which will be adjacent to the approved future mine pit area; and, develop two stockpile areas with a combined footprint of approximately 15ha to the southeast of the new waste rock dump. Figure 1 shows the locations.

Approval date: 25 February 2005

#### Attachment to Statement 523, change to definition of proposal

Proposal: Yandicoogina Iron Ore Mine and Railway

Change: Junction Central (figure 1, area 4) - new heavy vehicle workshop; new administration offices; new training room; new warehouse; Junction Central (figure 1, area 1, 2 & 7) – duplication of rail loop; Junction Central (figure 1, area 6) – expansion of permanent village; expansion of construction camp; upgrade of sewage treatment plant and expansion of effluent spray areas. Figure 1 shows the locations; and, Junction Central (figure 1, area 3 & 7 and area 5) – upgrade of substations at both the Tertiary Crushing and Screening Facilities; new explosives magazine facility; new power distribution infrastructure; and, realignment of road from airstrip to Junction Central.

Approval date: 25 February 2005

# Attachment to Statement 417 & 523

# Change to Description of Proposal

**Proposal:** Yandicoogina Iron Ore Mine & Railway, 90 km north-west of Newman Hamersley Range.

Proponent: Hamersley Iron Pty Limited.

**Change:** to the description in the Consultative Environmental Review for Statement for 417 and to Schedule 1 of Statement 523.

#### From:

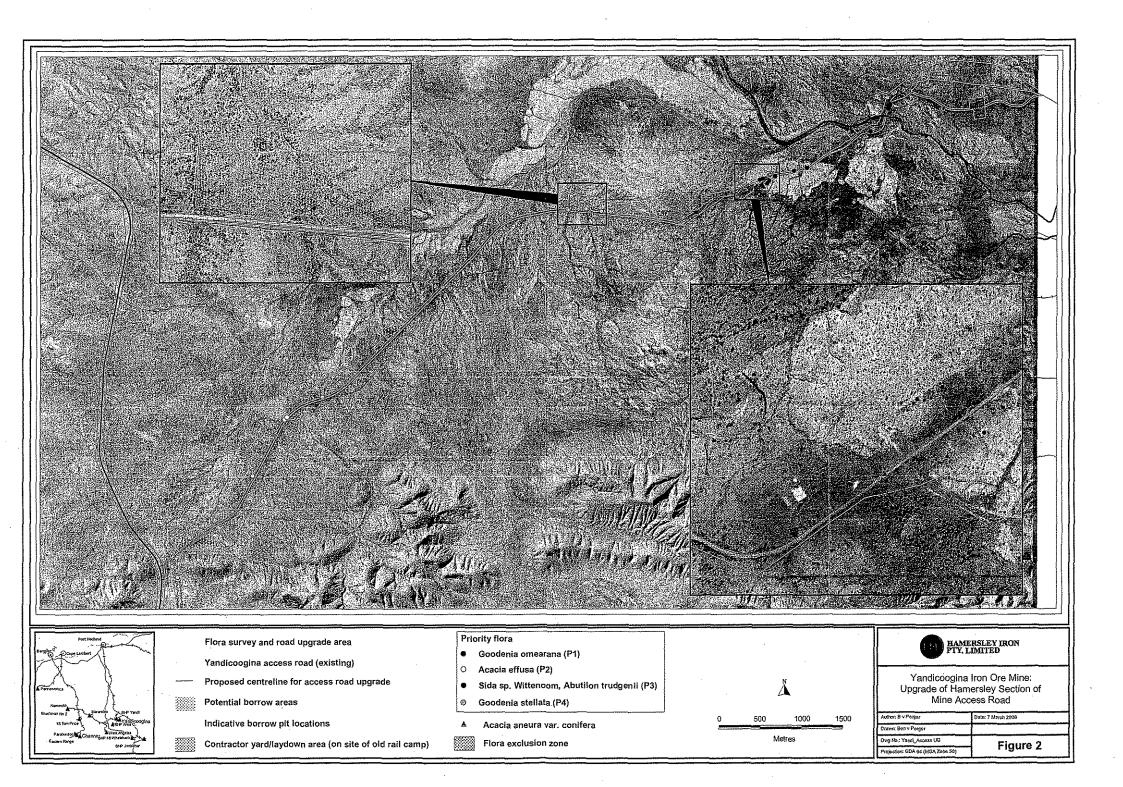
Element Quantities/Description		
Access Road	Unsealed road 27km long linking Great Northern Hwy and western boundary of BHPB's mining lease 70/270	

To:

Element	Quantities/Description
Access Road	Sealed road with minor deviations, new floodway crossing at Marillana Creek, and other improvements

Figure 2. Layout map

Approval Date: 12/05/0 6



#### Attachment 1 to Statement 523

#### Change to Proposal

**Proposal:** Yandicoogina Iron Ore Mine & Railway, 90 kilometres North-West of Newman, Hamersley Range

**Proponent:** Hamersley Iron Pty Ltd

**Change:** Increase of dewatering cap to 12 GL/a – s45C change to proposal

Aspect	Project (initial mining area)	Mining Area Extension	Variation from Project (initial mining area)
Length of CID to be mined	SL 12.2km to SL 15.0km	SL 15.0km to a point 750m beyond SL 19.0km (equivalent to 19.75km)	Additional 4.75km
Area of CID to be mined	300ha	375ha *	Additional 375ha *
Initial mining rate	About 8Mt/a, increasing to design capacity of 15Mt/a	About 15MT/a, maintaining design capacity	No change
Ore reserve to be mined	140Mt	160Mt, bringing total to 300Mt	Additional 160Mt
Estimated mine life	15-20 years	25-30 years	Additional 10-15 years
Mine pit profile	About 65m deep, 40m below pre-mine watertable	About 65m deep; 40m below pre-mine watertable	No change
Dewatering requirements	Initial: 30ML/d Maintenance: 10-15ML/d	Initial: 15-20ML/d Maintenance: 10-15ML/d	Initial - lower Maintenance - same
Volume of dewatering used	5ML/d	5ML/d	No change
Number of dewatering borefields	Two: - a Permanent borefield - a Sacrificial borefield	<ul> <li>Three:</li> <li>an existing Permanent Borefield</li> <li>a new Permanent Borefield on Phils Creek CID</li> <li>a new Sacrificial borefield in the main CID</li> </ul>	An additional Permanent borefield and a replacement Sacrificial borefield in the CID
Proportion of waste material backfilled (versus out-of-pit)	100% (after first three years, all waste reports as backfill, with out-of-pit waste used as backfill upon mine closure)	100% (waste reports as backfill from commencement of mining or is stockpiled and returned as backfill later)	No change
Proportion of mine void to be filled with overburden	About 50%	About 50%	No change
Mine infrastructure requirements	Refer CER (1995) and Section 1.2 and Figure 1.2 of the Section 46 Environmental Review document # >	Utilise existing infrastructure until additional ore processing plant (or re-location of existing one) needed. Some new haul roads also. # >	Additional or re-located ore processing plant. More haul roads. # >

**Approved Key Characteristics Table:** 

\* Original approval for 300ha of disturbance granted 1 October 1999, amended to expand existing waste rock dump area by 38ha, develop a new waste rock dump with an area of 22ha, and develop two stockpile areas with a combined footprint of approximately 15ha, approved on 25 February 2005.

# Original approval for site infrastructure granted 1 October 1999, amended to include a new heavy vehicle workshop, administration offices, training room, warehouse, expansion of permanent village, expansion of construction camp, upgrade of sewerage treatment plant, expansion of effluent spray areas, upgrade of substations at both the tertiary crushing and screening facilities, explosive magazine facility, power distribution infrastructure, and re-alignment of the road from the airstrip to Junction central, approved 25 February 2005.

> Original approval for site access road granted July 1996, subsequent expansion approval granted on 1 October 1999, and a change to description of the site access road in the Consultative Environmental Review for Statement 417 and to Schedule 1 of Statement 523, approved 12 May 2006.

Aspect	Project (initial mining area)	Mining Area Extension	Variation from Project (initial mining area)	
Length of CID to be mined	SL 12.2km to SL 15.0km	SL 15.0km to a point 750m beyond SL 19.0km (equivalent to 19.75km)	Additional 4.75km	
Area of CID to be mined	300ha	375ha *	Additional 375ha *	
Initial mining rate	About 8Mt/a, increasing to design capacity of 15Mt/a	About 15MT/a, maintaining design capacity	No change	
Ore reserve to be mined	140Mt	160Mt, bringing total to 300Mt	Additional 160Mt	
Estimated mine life	15-20 years	25-30 years	Additional 10-15 years	
Mine pit profile	About 65m deep, 40m below pre-mine watertable	About 65m deep; 40m below pre-mine watertable	No change	
Dewatering requirements	12 giga litres per annum dewatering for initial and extension mining area combined. The sum total of abstraction for both Yandi Junction Central (Statement 523) & Junction South East (Statement 695) mines should not exceed 35 giga litres per annum.	12 giga litres per annum dewatering for initial and extension mining area combined. The sum total of abstraction for both Yandi Junction Central (Statement 523) & Junction South East (Statement 695) mines should not exceed 35 giga litres per annum.	Removed – dewatering initial and maintenance phases no longer differentiated.	
Volume of dewatering used	5ML/d	5ML/d	No change	
Number of dewatering borefields	Two: - a Permanent borefield - a Sacrificial borefield	<ul> <li>Three:</li> <li>an existing Permanent Borefield</li> <li>a new Permanent Borefield on Phils Creek CID</li> <li>a new Sacrificial borefield in the main CID</li> </ul>	An additional Permanent borefield and a replacement Sacrificial borefield in the CID	
Proportion of waste material backfilled (versus out-of-pit)	100% (after first three years, all waste reports as backfill, with out-of-pit waste used as backfill upon mine closure)	100% (waste reports as backfill from commencement of mining or is stockpiled and returned as backfill later)	No chánge	
Proportion of mine void to be filled with overburden	About 50%	About 50%	No change	
Mine infrastructure requirements	Refer CER (1995) and Section 1.2 and Figure 1.2 of the Section 46 Environmental Review document #>	Utilise existing infrastructure until additional ore processing plant (or re-location of existing one) needed. Some new haul roads also. #>	Additional or re-located ore processing plant. More haul roads. #>	

#### Amended Key Characteristics Table:

\* Original approval for 300ha of disturbance granted 1 October 1999, amended to expand existing waste rock dump area by 38ha, develop a new waste rock dump with an area of 22ha, and develop two stockpile areas with a combined footprint of approximately 15ha, approved on 25 February 2005.

# Original approval for site infrastructure granted 1 October 1999, amended to include a new heavy vehicle workshop, administration offices, training room, warehouse, expansion of permanent village, expansion of construction camp, upgrade of sewerage treatment plant, expansion of effluent spray areas, upgrade of substations at both the tertiary crushing and screening facilities, explosive magazine facility, power distribution infrastructure, and re-alignment of the road from the airstrip to Junction central, approved 25 February 2005.

> Original approval for site access road granted July 1996, subsequent expansion approval granted on 1 October 1999, and a change to description of the site access road in the Consultative Environmental Review for Statement 417 and to Schedule 1 of Statement 523, approved 12 May 2006.

## Dr Paul Vogel

CHAIRMAN Environmental Protection Authority under delegated authority

Approval date: 1617/09

### Attachment 2 to Statement 523

Change to Proposal

**Proposal:** Yandicoogina Iron Ore Mine & Railway 90 Kilometres North-West of Newman Hamersley Range

Proponent: Hamersley Iron Pty Limited

**Change:** To develop a new pit cutback near Phil's Creek, and to relocate the position of an approved Junction Central waste fines cell (see attached figure 2a).

Aspect	Project (initial mining area)	Mining Area Extension	Variation from Project (initial mining area)
Length of CID to be mined	SL 12.2km to SL 15.0km	SL 15.0km to a point 750m beyond SL 19.0km (equivalent to 19.75km)	Additional 4.75km
Area of CID to be mined	300ha	375ha *	Additional 375ha *
Initial mining rate	About 8Mt/a, increasing to design capacity of 15Mt/a	About 15MT/a, maintaining design capacity	No change
Ore reserve to be mined	140Mt	160Mt, bringing total to 300Mt	Additional 160Mt
Estimated mine life	15-20 years	25-30 years	Additional 10-15 years
Mine pit profile	About 65m deep, 40m below pre-mine watertable	About 65m deep; 40m below pre-mine watertable	No change
Dewatering requirements	12 giga litres per annum dewatering for initial and extension mining area combined. The sum total of abstraction for both Yandi Junction Central (Statement 523) & Junction South East (Statement 695) mines should not exceed 35 giga litres per annum. ^	12 giga litres per annum dewatering for initial and extension mining area combined. The sum total of abstraction for both Yandi Junction Central (Statement 523) & Junction South East (Statement 695) mines should not exceed 35 giga litres per annum. ^	Removed – dewatering initial and maintenance phases no longer differentiated. ^
Volume of dewatering used	5ML/d	5ML/d	No change
Number of dewatering borefields	Two: - a Permanent borefield - a Sacrificial borefield	<ul> <li>Three:</li> <li>an existing Permanent Borefield</li> <li>a new Permanent Borefield on Phils Creek CID</li> <li>a new Sacrificial borefield in the main CID</li> </ul>	An additional Permanent borefield and a replacement Sacrificial borefield in the CID
Proportion of waste material backfilled (versus out-of-pit)	100% (after first three years, all waste reports as backfill, with out-of-pit waste used as backfill upon mine closure)	100% (waste reports as backfill from commencement of mining or is stockpiled and returned as backfill later)	No change
Proportion of mine void to be filled with overburden	About 50%	About 50%	No change
Mine infrastructure requirements	Refer CER (1995) and Section 1.2 and Figure 1.2 of the Section 46 Environmental Review document #>	Utilise existing infrastructure until additional ore processing plant (or re-location of existing one) needed. Some new haul roads also. #>	Additional or re-located ore processing plant. More haul roads. #>

**Approved Key Characteristics Table:** 

\* Original approval for 300ha of disturbance granted 1 October 1999, amended to expand existing waste rock dump area by 38ha, develop a new waste rock dump with an area of 22ha, and develop two stockpile areas with a combined footprint of approximately 15ha, approved on 25 February 2005.

# Original approval for site infrastructure granted 1 October 1999, amended to include a new heavy vehicle workshop, administration offices, training room, warehouse, expansion of permanent village, expansion of construction camp, upgrade of sewerage treatment plant, expansion of effluent spray areas, upgrade of substations at both the tertiary crushing and screening facilities, explosive magazine facility, power distribution infrastructure, and re-alignment of the road from the airstrip to Junction central, approved 25 February 2005.

> Original approval for site access road granted July 1996, subsequent expansion approval granted on 1 October 1999, and a change to description of the site access road in the Consultative Environmental Review for Statement 417 and to Schedule 1 of Statement 523, approved 12 May 2006.

^ Original approval for dewatering granted July 1996, subsequent expansion approval granted on 1 October 1999, and a change to volume and composition of site dewatering, approved 16 July 2009.

Aspect	Project (initial mining area)	Mining Area Extension	Variation from Project (initial mining area)
Length of CID to be mined	230m prior to SL 12.2km (equivalent to SL 11.97km) to SL 15.0km	SL 15.0km to a point 750m beyond SL 19.0km (equivalent to 19.75km)	Additional <b>4.98km</b>
Area of CID to be mined	300ha	375ha *	Additional 375ha *
Initial mining rate	About 8Mt/a, increasing to design capacity of 15Mt/a	About 15MT/a, maintaining design capacity	No change
Ore reserve to be mined	140Mt	160Mt, bringing total to 300Mt	Additional 160Mt
Estimated mine life	15-20 years	25-30 years	Additional 10-15 years
Mine pit profile	About 65m deep, 40m below pre-mine watertable	About 65m deep; 40m below pre-mine watertable	No change
Dewatering requirements	12 giga litres per annum dewatering for initial and extension mining area combined. The sum total of abstraction for both Yandi Junction Central (Statement 523) & Junction South East (Statement 695) mines should not exceed 35 giga litres per annum. ^	12 giga litres per annum dewatering for initial and extension mining area combined. The sum total of abstraction for both Yandi Junction Central (Statement 523) & Junction South East (Statement 695) mines should not exceed 35 giga litres per annum. ^	Removed – dewatering initial and maintenance phases no longer differentiated. ^
Volume of dewatering used	5ML/d	5ML/d	No change
Number of dewatering borefields	Two: - a Permanent borefield - a Sacrificial borefield	<ul> <li>Three:</li> <li>an existing Permanent Borefield</li> <li>a new Permanent Borefield on Phils Creek CID</li> <li>a new Sacrificial borefield in the main CID</li> </ul>	An additional Permanent borefield and a replacement Sacrificial borefield in the CID
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Proportion of mine void to be filled with overburden	About 50%	About 50%	No change
Mine infrastructure requirements	Refer CER (1995) and Section 1.2 and Figure 1.2 of the Section 46 Environmental Review document #>	Utilise existing infrastructure until additional ore processing plant (or re-location of existing one) needed. Some new haul roads also. #>	Additional or re-located ore processing plant. More haul roads. #>

#### **Amended Key Characteristics Table:**

\* Original approval for 300ha of disturbance granted 1 October 1999, amended to expand existing waste rock dump area by 38ha, develop a new waste rock dump with an area of 22ha, and develop two stockpile areas with a combined footprint of approximately 15ha, approved on 25 February 2005.

# Original approval for site infrastructure granted 1 October 1999, amended to include a new heavy vehicle workshop, administration offices, training room, warehouse, expansion of permanent village, expansion of construction camp, upgrade of sewerage treatment plant, expansion of effluent spray areas, upgrade of substations at both the tertiary crushing and screening facilities, explosive magazine facility, power distribution infrastructure, and re-alignment of the road from the airstrip to Junction central, approved 25 February 2005.

> Original approval for site access road granted July 1996, subsequent expansion approval granted on 1 October 1999, and a change to description of the site access road in the Consultative Environmental Review for Statement 417 and to Schedule 1 of Statement 523, approved 12 May 2006.

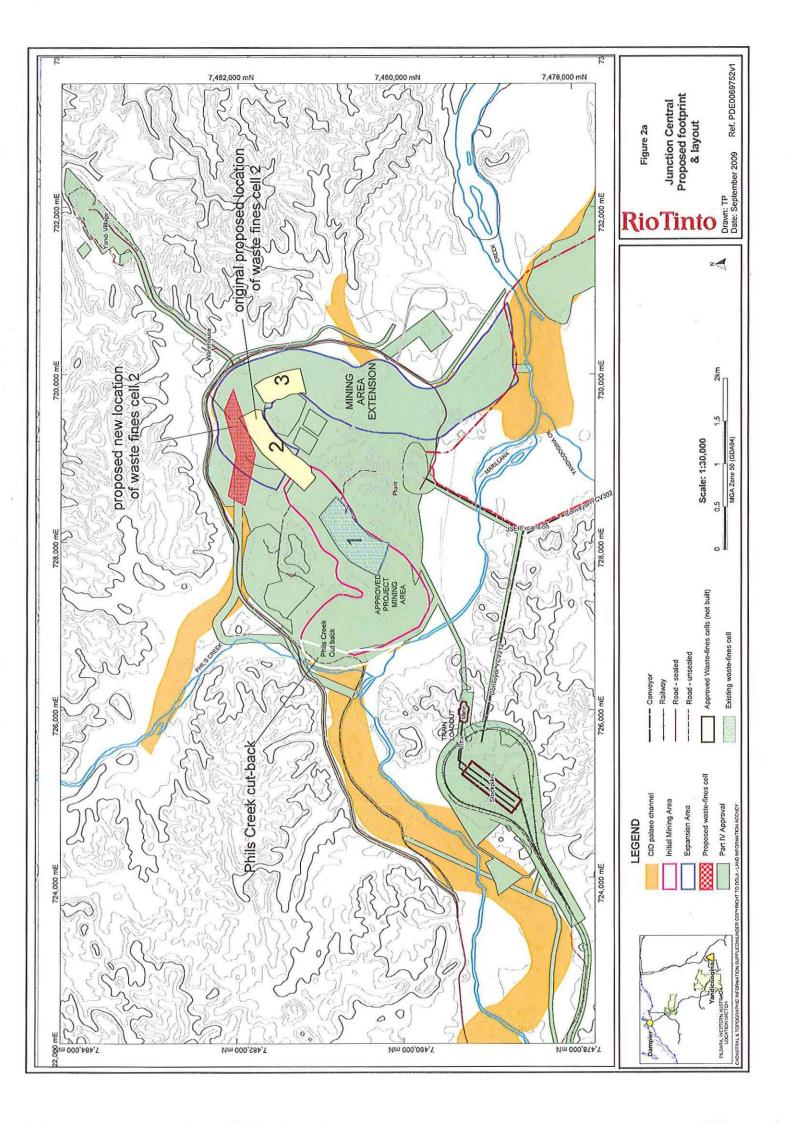
^ Original approval for dewatering granted July 1996, subsequent expansion approval granted on 1 October 1999, and a change to volume and composition of site dewatering, approved 16 July 2009.

## **List of Figures:**

Figure 2a: Junction Central Proposed Footprint and Layout (including new Phil's cutback and waste fines cell location.

**Dr Paul Vogel** CHAIRMAN Environmental Protection Authority under delegated authority

Approval date: 16 June 2010



## Attachment 3 to Ministerial Statement 523

# Change to Proposal

Proposal: Yandicoogina Iron Ore Mine & Railway, 90 kilometres North-West of Newman, Hamersley Range

Proponent: Hamersley Iron Pty Limited

**Change:** Increase site footprint by 225ha, additional ore stockpiles and infrastructure, update footprint for site and raise mining rate to 36Mt/a.

### Key Characteristics Table:

Element	Project (initial mining area)	Mining Area Extension	Variation from Project (initial mining area)
Length of CID to be mined	SL 12.2km (equivalent to SL 11.97km) to SL 15.0km	SL 15.0km to a point 750m beyond SL 19.0km (equivalent to 19.75km)	Additional 4.98km
Area of CID to be mined	300ha	375ha	Additional 375ha
Total Mining Area Including Rail Loop and Rail Line			Total 2,100ha #
Initial mining rate	About 8Mt/a, increasing to a design capacity of <b>21 Mt/a</b>	15Mt/a maintaining design capacity	Total of 36 Mt/a*
Ore reserve to be mined	140Mt	160Mt, bringing total to 300Mt	Additional 160Mt
Estimated mine life	15-20 years	25-30 years	Additional 10-15 years
Mine pit profile	About 65m deep, 40m below pre-mine watertable	About 65m deep; 40m below pre- mine watertable	No change
Dewatering requirements	12 giga litres per annum dewatering for initial and extension mining area combined. The sum total of abstraction for both Yandi Junction Central	12 giga litres per annum dewatering for initial and extension mining area combined. The sum total of abstraction for both Yandi Junction Central (Statement 523) & Junction South	Removed – dewatering initial and maintenance phases no longer differentiated.
	(Statement 523) & Junction South East (Statement 695) mines should not exceed 35 giga litres per annum.	East (Statement 695) mines should not exceed 35 giga litres per annum.	
Volume of dewatering used	5ML/d	5ML/d	No change
Number of dewatering borefields	Two: - a Permanent borefield - a Sacrificial borefield	<ul> <li>Three:</li> <li>an existing Permanent Borefield</li> <li>a new Permanent Borefield on Phils Creek CID</li> <li>a new Sacrificial borefield in the main CID</li> </ul>	An additional Permanent borefield and a replacement Sacrificial borefield in the CID
Proportion of waste material backfilled (versus out-of-pit)	100% (after first three years, all waste reports as backfill, with out-of-pit waste used as backfill upon mine closure)	100% (waste reports as backfill from commencement of mining or is stockpiled and returned as backfill later)	No change
Proportion of mine void to be filled with overburden	About 50%	About 50%	No change
Mine infrastructure requirements	Refer CER (1995) and Section 1.2 and Figure 1.2 of the Section 46 Environmental Review document	Utilise existing infrastructure until additional ore processing plant (or re-location of existing one) needed. Some new haul roads also.	Additional ore-located ore processing plant. More haul roads. Additional moveable stacker & conveyor, buildings, & extension of discharge pipeline

\* This figure represents total approved mining rate, considering all approved attachments to Statements 417 and 523 to date. # This figure expresses total clearance approved for the site, both under Statements 417 and 523, and under EP Act 1986 Part V vegetation clearing permits. This is an increase of 225 ha from the previously approved value of 1875 ha. Note: Text in **bold** in the Key Characteristics Table, indicates change/s to the proposal.

List of Figures:

Updated Figure 2a:

**Dr Paul Vogel** CHAIRMAN Environmental Protection Authority under delegated authority

Approval date: 15 December 2011

