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Published on: 28 January 2011

Statement No. 852

**STATEMENT THAT A PROPOSAL MAY BE IMPLEMENTED
(PURSUANT TO THE PROVISIONS OF THE
ENVIRONMENTAL PROTECTION ACT 1986)**

CARINA IRON ORE MINE, APPROXIMATELY 60 KILOMETRES NORTH-
EAST OF KOOLYANOBING, SHIRE OF YILGARN

Proposal: The proposal is to construct and operate an iron ore mine in the Goldfields region of Western Australia. The proposal involves mining of hematite direct shipping ore (DSO) from a single open pit on the Yendilberin Hills, which form part of the Finnerty Range.

The proposal is further documented in schedule 1 of this statement.

Proponent: Polaris Metals Pty Ltd (ACN: 085 223 570)

Proponent Address: Level 2, 1109 Hay Street
WEST PERTH WA 6005

Assessment Number: 1756

Report of the Environmental Protection Authority: Report 1368

Appeal Number: 93 of 2010

The proposal referred to in the above report of the Environmental Protection Authority may be implemented. The implementation of that proposal is subject to the following conditions and procedures:

1 Proposal Implementation

1-1 The proponent shall implement the proposal as documented and described in schedule 1 of this statement subject to the conditions and procedures of this statement.

2 Proponent Nomination and Contact Details

- 2-1 The proponent for the time being nominated by the Minister for Environment under sections 38(6) or 38(7) of the *Environmental Protection Act 1986* is responsible for the implementation of the proposal.
- 2-2 The proponent shall notify the CEO of any change of the name and address of the proponent for the serving of notices or other correspondence within 30 days of such change.

3 Time Limit of Authorisation

- 3-1 The authorisation to implement the proposal provided for in this statement shall lapse and be void five years after the date of this statement if the proposal to which this statement relates is not substantially commenced.
- 3-2 The proponent shall provide the CEO with written evidence which demonstrates that the proposal has substantially commenced on or before the expiration of five years from the date of this statement.

4 Compliance Reporting

- 4-1 The proponent shall prepare and maintain a compliance assessment plan to the satisfaction of the CEO.
- 4-2 The proponent shall submit to the CEO the compliance assessment plan required by condition 4-1 at least six months prior to the first compliance report required by condition 4-6, or prior to implementation, whichever is sooner.

The compliance assessment plan shall indicate:

- 1 the frequency of compliance reporting;
 - 2 the approach and timing of compliance assessments;
 - 3 the retention of compliance assessments;
 - 4 the method of reporting of potential non-compliances and corrective actions taken;
 - 5 the table of contents of compliance assessment reports; and
 - 6 public availability of all compliance assessment reports.
- 4-3 The proponent shall assess compliance with conditions in accordance with the compliance assessment plan required by condition 4-1.

- 4-4 The proponent shall retain reports of all compliance assessments described in the compliance assessment plan required by condition 4-1 and shall make those reports available when requested by the CEO.
- 4-5 The proponent shall advise the CEO of any potential non-compliance within seven days of that non-compliance being known.
- 4-6 The proponent shall submit to the CEO the first compliance assessment report fifteen months from the date of issue of this statement addressing the twelve month period from the date of issue of this statement and then annually from the date of submission of the first compliance assessment report.

The compliance assessment report shall:

- 1 be endorsed by the proponent's Chief Executive Officer or a person delegated to sign on the Chief Executive Officer's behalf;
- 2 include a statement as to whether the proponent has complied with the conditions;
- 3 identify all potential non-compliances and describe corrective and preventative actions taken;
- 4 be made publicly available in accordance with the approved compliance assessment plan; and
- 5 indicate any proposed changes to the compliance assessment plan required by condition 4-1.

5 Protection of vegetation

- 5-1 The proponent shall implement the proposal so that it does not adversely affect vegetation, in particular S2 and W22 vegetation communities, outside the proposal boundary as shown in Figure 2 and delineated by MGA co-ordinates listed in Schedule 2.
- 5-2 The proponent shall ensure that the implementation of the proposal does not result in (through either direct or indirect impacts) a loss of more than 8.6 ha of the S2 vegetation community and 66 ha of the W22 vegetation community.
- 5-3 The proponent shall monitor prior to disturbance and every 12 months the health and condition of vegetation located within 1 kilometre of the proposal boundary as shown in Figure 2 and delineated by MGA co-ordinates listed in Schedule 2. This monitoring is to be carried out to the satisfaction of the CEO on advice of the DEC.

5-4 Should the potential impact sites show a 25 per cent (or greater) decline in cover or productivity, the proponent shall provide a report to the CEO within 21 days of the decline being identified which:

- 1 describes the decline;
- 2 provides information which allows determination of the likely root cause of the decline; and
- 3 if likely to be caused by activities undertaken in implementing the proposal, states the actions and associated timelines proposed to remediate the decline.

5-5 The proponent shall, on approval of the CEO, implement the actions identified in 5-4 (3) and continue to implement such actions until the CEO determines that the remedial actions may cease.

6 Fauna mortality

6-1 Prior to ground disturbing activities the proponent shall prepare and submit strategies to avoid fauna deaths in areas of mining, the haul road, the rail siding and other areas associated with the proposal on advice of DEC and to the satisfaction of the CEO.

6-2 The proponent shall implement the strategies as required by condition 6-1.

6-3 Prior to ground disturbing activities the proponent shall prepare and implement a Fauna Mortality Register for conservation significant species in the proposal area on advice of DEC and to the satisfaction of the CEO.

6-4 The proponent shall produce a report with details of fauna mortalities including the cause, location, number and type of species to the CEO as part of the compliance assessment report required by condition 4-6 and provide a report to the DEC.

6-5 The proponent shall review and revise the strategies required by condition 6-1 as required by the CEO.

7 Flora Survey

7-1 Within 18 months of ground disturbance the proponent shall undertake a flora survey within the areas delineated by MGA co-ordinates provided in Schedule 3 that are located within the yellow sandplain vegetation type to determine the presence and abundance of priority flora species present.

7-2 The survey will be conducted in accordance with Environmental Protection Authority *Guidance Statement 51 Terrestrial Flora and*

Vegetation Surveys for Environmental Impact Assessment in Western Australia (June 2004) or its revisions and to the satisfaction of the CEO.

- 7-3 Within 24 months of ground disturbing activities the proponent shall submit the results of the survey required by condition 7-1 to the requirements of the CEO on advice of the DEC.
- 7-4 The proponent shall make the results of the survey required by condition 7-3 publicly available in a manner approved by the CEO.

8 Troglifauna

- 8-1 The proponent shall undertake a baseline troglifauna survey within 15 kilometres of the Project Boundary (as shown in Figure 2 and delineated by MGA co-ordinates listed in Schedule 2) in similar geological formations to validate predictions of habitat connectivity and improve knowledge of troglifauna populations in the region to inform future management of mining and associated operations.
- 8-2 The baseline troglifauna survey shall be undertaken in accordance with the draft Environmental Protection Authority *Guidance Statement 54a Sampling Methods and Survey Considerations for Subterranean Fauna in Western Australian* (August 2007) or its revisions and to the satisfaction of the CEO.
- 8-3 Within 30 months of ground disturbing activities the proponent shall prepare and submit a technical report based on the results of the survey required by condition 8-1 to the requirements of the CEO on advice of the DEC.
- 8-4 The proponent shall make the report required by condition 8-3 publicly available in a manner approved by the CEO.

9 Project Environmental Management Plan

- 9-1 Prior to ground disturbing activities the proponent shall prepare a Project Environmental Management Plan to the satisfaction of the DEC. The objectives of the plan are to ensure that the adverse impacts from mining and associated activities do not unnecessarily threaten conservation values within the mining lease and prevent impacts outside of the mining lease.

The project environmental management plan will address:

- 1 Hygiene management measures to prevent the introduction of weeds and dieback disease.
- 2 Management of feral animals.

- 3 Company protocols to authorise disturbance and clearance of vegetation.
 - 4 Limiting and authorising access to areas within the mining lease.
 - 5 Fire prevention and response.
 - 6 Management and monitoring of saline water used for dust suppression.
- 9-2 The proponent shall implement the Project Environmental Management Plan required by condition 9-1.
 - 9-3 The proponent shall review and revise the Project Environmental Management Plan required by condition 9-1 at intervals not exceeding three years.
 - 9-4 The proponent shall report to the CEO on implementation of the Project Environmental Management Plan every two years from the date of commencing ground disturbing activities.
 - 9-5 The proponent shall make the Project Environmental Management Plan required by condition 9-1 publicly available in a manner approved by the CEO.

10 Weeds

- 10-1 The proponent shall ensure that:
 - 1 No new species of weeds (including both declared weeds and environmental weeds) are introduced into the proposal area as a result of the implementation of the proposal.
 - 2 Prior to ground disturbing activities the proponent shall undertake a baseline weed survey to determine the species and extent of weeds (including both declared weeds and environmental weeds) present within the proposal area to the requirements of the CEO on advice of the DEC.
 - 3 Within 12 months of the date of publication of this statement the proponent shall establish at least three reference sites on undisturbed land (not impacted by the proposal) at each of the mine, haul road, rail siding and accommodation facilities. Reference sites are to be chosen in consultation with the DEC. The reference sites are to be monitored every 2 years to determine whether changes in weed cover and type within and up to 1 kilometre from the Project Boundary (as shown in Figure 2 and delineated by MGA co-ordinates listed in Schedule 2) are as a result of project implementation or broader regional changes.

- 4 The species and extent of weed cover within the proposal area shall not exceed that identified in the baseline survey identified in condition 10-1(2) or exceed that existing on comparable, nearby land, determined by condition 10-1(3) which has not been disturbed during implementation of the proposal, whichever is less.

NOTE: Environmental weeds are plants that establish themselves in natural ecosystems (marine, aquatic and terrestrial) and proceed to modify natural processes, usually adversely, resulting in the decline of the communities they invade. Impacts of environmental weeds on ecosystem function include:

- resource competition,
- prevention of seedling recruitment,
- alteration to geomorphological processes,
- alteration of hydrological cycle,
- changes to soil nutrient status,
- alteration of fire regime,
- changes to the abundance of indigenous fauna, and
- genetic changes.

(Carr et al., 1992; Humphries et al., 1993, Csurhes and Edwards, 1998).

11 Rehabilitation

- 11-1 The proponent shall undertake progressive rehabilitation over the life of the proposal to achieve the following outcomes:
 - 1 The waste material landforms shall be non-polluting and shall be constructed so that their stability, surface drainage, resistance to erosion and ability to support local native vegetation are similar to undisturbed natural analogue landforms as demonstrated by Ecosystem Function Analysis or other methodology acceptable to the CEO.
 - 2 The waste material landforms and other areas disturbed through implementation of the proposal (excluding mine pits), shall be progressively rehabilitated with vegetation composed of native plant species of local provenance.
 - 3 Within 12 months of the date of publication of this statement the proponent shall conduct surveys of each of the vegetation communities that will be impacted by the proposal to collect adequate information in preparation for setting completion criteria for rehabilitation to the requirements of the CEO on advice of the DEC.
 - 4 The methodology of the survey required in condition 11-1(3) shall be prepared in consultation and to the satisfaction of the DEC.

- 5 Within 18 months of mining commencing the proponent will develop completion criteria for rehabilitation to the requirements of the CEO on advice from the DEC.
 - 6 The percentage cover of living self sustaining native vegetation in all rehabilitation areas shall be comparable to that of undisturbed natural analogue sites as demonstrated by Ecosystem Function Analysis and species diversity as demonstrated by other methodology acceptable to the CEO.
 - 7 No new species of weeds (including both declared weeds and environmental weeds) are introduced into the rehabilitated areas as a result of the implementation of the proposal.
 - 8 The cover of weeds (including both declared weeds and environmental weeds) in rehabilitated areas shall not exceed that identified in the baseline survey condition 10-1(2) or exceed that existing on comparable, nearby land, determined by condition 10-1(3) which has not been disturbed during implementation of the proposal, whichever is less.
- 11-2 The proponent shall monitor progressively the rehabilitation for a range of sites against the criteria developed pursuant to condition 11-1(5) with appropriately timed surveys as agreed with the DEC, until the completion criteria are met. The surveys shall be conducted annually unless otherwise agreed by the CEO, on advice from the DEC.
- 11-3 The proponent shall include the results of the rehabilitation monitoring required pursuant to condition 11-2 in the compliance assessment report referred to in condition 4-6 commencing from the date rehabilitation was commenced. The report shall address the following:
- 1 The progress made towards meeting the completion criteria developed pursuant to condition 11-1(5); and
 - 2 Contingency management measures in the event that the completion criteria required by condition 11-1(5) are unlikely to be met.
- 11-4 The proponent shall make the monitoring reports required by condition 11-2 publicly available in a manner approved by the CEO.

12 Conceptual Closure Strategy

- 12-1 Prior to construction of the waste dump, the proponent shall submit a detailed and project-specific Mine Plan and Preliminary Closure Strategy to the requirements of the CEO on advice of the DMP and DEC.

- 12-2 The Mine Plan and Preliminary Closure Strategy shall include detailed results of geochemical and geophysical characterisation of materials, in particular the potential for acid drainage, metalliferous drainage, and of the occurrence of dispersive materials and asbestiform minerals. Testing for materials with potential to cause acid and/or metalliferous drainage shall include static and kinetic testing carried out using techniques and timeframes consistent with national and international standards (*Leading Practice Sustainable Development Program for the Mining Industry – Managing Acid and Metalliferous Drainage 2009* – Department of Industry, Tourism and Resources; *The Global Acid Rock Drainage Guide 2009* – International Network for Acid Prevention).
- 12-3 The Mine Plan and Preliminary Closure Strategy shall provide detailed technical information on proposed management measures to prevent pollution, environmental harm or human health impacts during implementation of the proposal and after mine completion and closure.
- 12-4 The Mine Plan and Preliminary Closure Strategy shall include maps and diagrams showing the proposed placement, dimensions, design and proposed methods of construction and closure of waste disposal facilities, mine pits and evaporation pond.
- 12-5 The Mine Plan and Preliminary Closure Strategy shall demonstrate that waste disposal facilities will be located, designed and constructed to ensure that they are non-polluting and so that their final shape, height, stability and ability to support native vegetation are comparable to natural landforms in the area.
- 12-6 The proponent shall implement the Mine Plan and Preliminary Closure Strategy referred to in conditions 12-1 to 12-5.
- 12-7 The proponent shall make the Mine Plan and Preliminary Closure Strategy referred to in conditions 12-1 to 12-5 publicly available in a manner approved by the CEO.

13 Final Closure and Decommissioning Plan

- 13-1 At least 3 years prior to mine completion, the proponent shall prepare and submit a Final Closure and Decommissioning Plan to the requirements of the CEO, on advice of the DEC and DMP.
- 13-2 The Final Closure and Decommissioning Plan shall be prepared consistent with:

- 1 ANZMEC/MCA 2000, *Strategic Framework for Mine Closure Planning*; and

- 2 Department of Industry Tourism and Resources 2006 *Mine Closure and Completion* (Leading Practice Sustainable Development Program for the Mining Industry), Commonwealth Government, Canberra;
- 13-3 The Final Closure and Decommissioning Plan shall provide detailed technical information on the following:
- 1 Final closure of all areas disturbed through implementation of the proposal so that they are safe, stable and non-polluting.
 - 2 Details of a monitoring program to be carried out to inform final closure procedures for the pit void such that the standing water body does not cause environmental harm by:
 - attracting native fauna which may be subsequently harmed; or
 - attracting fauna which may harm native fauna populations and/or surrounding native vegetation.
 - 3 Management actions to be undertaken based on the findings under condition 13-3(2).
 - 4 Decommissioning of all plant and equipment.
 - 5 Disposal of waste materials.
 - 6 Final rehabilitation of:
 - the minesite including waste material landforms and other areas outside the mine pit; and
 - the haul road and accommodation facilities.
 - 7 Management and monitoring following mine completion.
 - 8 Inventory of all contaminated sites and proposed management.
- 13-4 The proponent shall make the Final Closure and Decommissioning Plan required by conditions 13-1 to 13-3 publicly available in a manner approved by the CEO.
- 13-5 The proponent shall close, decommission and rehabilitate the proposal in accordance with the Final Closure and Decommissioning Plan required by conditions 13-1 to 13-3.

14 Definitions

In these conditions, unless contrary intention appears:

“CEO” means the Chief Executive Officer of the Office of the Environmental Protection Authority;

“DEC” means the Department of Environment and Conservation;

“DMP” means the Department of Mines and Petroleum;

“Ecosystem Function Analysis” relates to the methodology set out in Tongway DJ and Hindley 2004 *Landscape Function Analysis – Procedures for Monitoring and Assessing Landscapes*, Commonwealth Scientific and Industrial Research Organisation Sustainable Ecosystems, Canberra.

Notes

1. The Chief Executive Officer may seek advice from other agencies or organisations, as required.
2. The Minister for Environment will determine any dispute between the proponent and the Office of the Environmental Protection Authority over the fulfilment of the requirements of the conditions.

[Signed 27 January 2011]

HON BILL MARMION MLA
MINISTER FOR ENVIRONMENT; WATER

The Proposal (Assessment No. 1756)

The proposal is to construct and operate an iron ore mine in the Goldfields region of Western Australia. The proposal involves mining of hematite direct shipping ore (DSO) from a single open pit on the Yendilberin Hills, which form part of the Finnerty Range.

The location of the various project components is shown in Figure 1.

The main characteristics of the proposal are summarised in Table 1 below. A detailed description of the proposal is provided in section 3 of the proponent's Public Environmental Review Carina Iron Ore Mine: Yilgarn Region WA Polaris metals NL (March 2010).

Table 1: Summary of key proposal characteristics

Element	Description
General	
Project Life	Up to 10 years
Area of disturbance	Up to 460 ha comprising: <ul style="list-style-type: none"> • Open pit – 60 ha; • Waste dump – 140 ha; • ROM pad and mine infrastructure – 50 ha; • Haul road – 150 ha; • Rail siding and infrastructure – 42.5 ha; • Rail siding borrow pits – 7.5 ha; and • Accommodation village and associated infrastructure – 10 ha
Resource	21.4 Mt DSO
Mining	
Type	Mining of hematite DSO below the water table
Pit	Single open pit with dimensions of 1500 m long, 380 m wide, 170 m deep
Mining rate	Up to 4 Mt/a
Waste dump	Single waste dump with dimensions of 1720 m long, 810 m wide, 35 m high
Waste rock	Up to 22.8 million bcm (equivalent million lcm)
Potentially Acid Forming (PAF) material	1 – 2% by volume (PAF material is to be encapsulated in the waste dump)
Pit dewatering	Up to 411 ML/a (1126 kL/d)
Infrastructure	
Water supply	Combination of water sources: <ul style="list-style-type: none"> • Pit dewatering;

Element	Description
	<ul style="list-style-type: none"> Water from local bores piped to filling stations along the haul road; and Bores at the rail siding
Water consumption	Up to 678 ML/a
Power supply	Diesel powered generators at the minesite and main work centre (rail siding)
Product transportation	Trucked via road from the minesite to the rail siding, then taken via rail to the Port of Fremantle (Kwinana)
Site access	Via the Mt Walton East Intractable Waste Facility (IWF) access road to the rail siding

Abbreviations:

bcm bank cubic metres
DSO direct shipping ore
ha hectare
kL/d kilolitres per day
lcm loose cubic metres

m metre
ML/a million litres per annum
Mt million tonnes
Mt/a million tonnes per annum

Figure 1 Mine Site Components.

Figure 2 Project Boundary

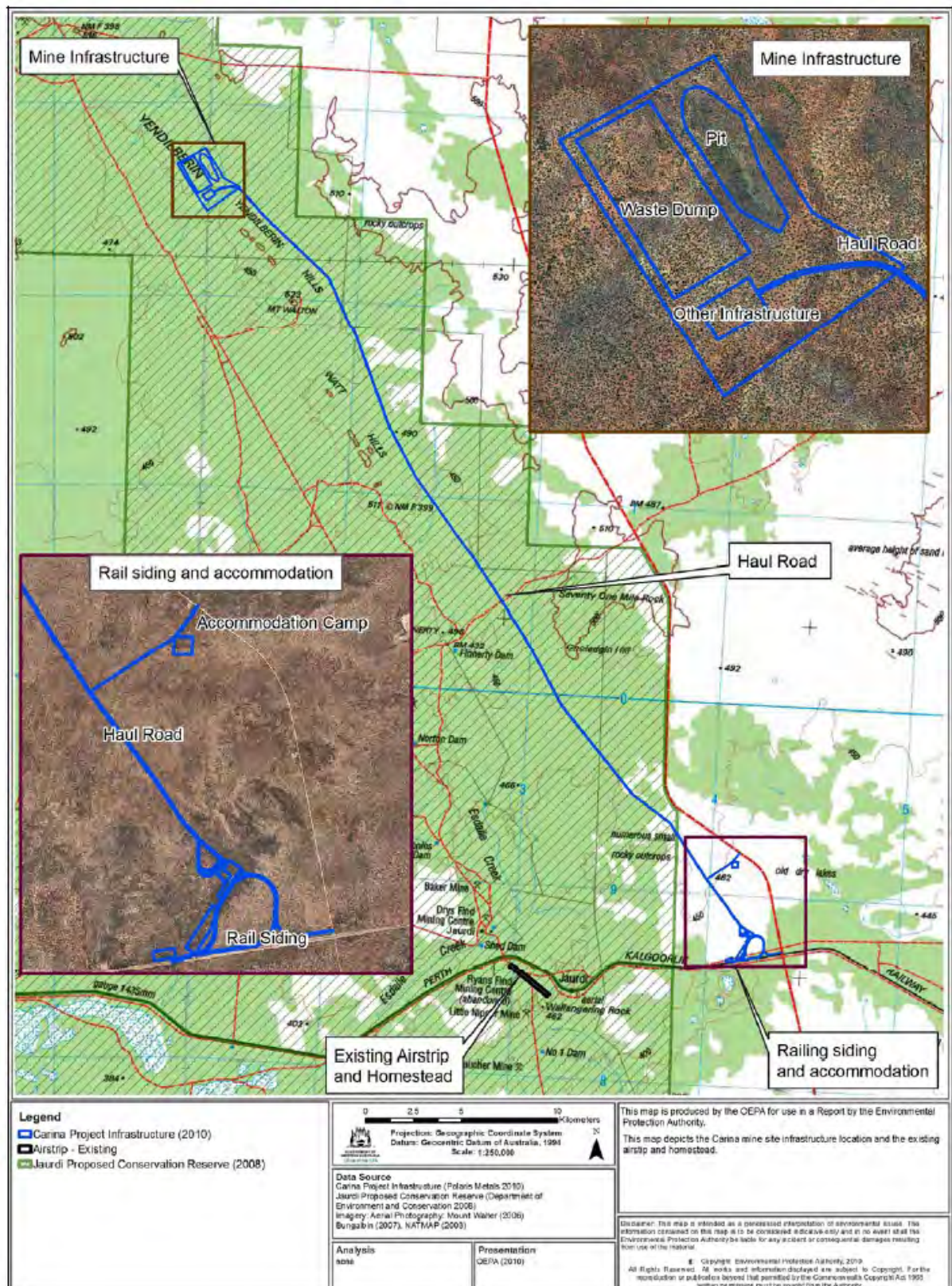


Figure 1 Mine site components

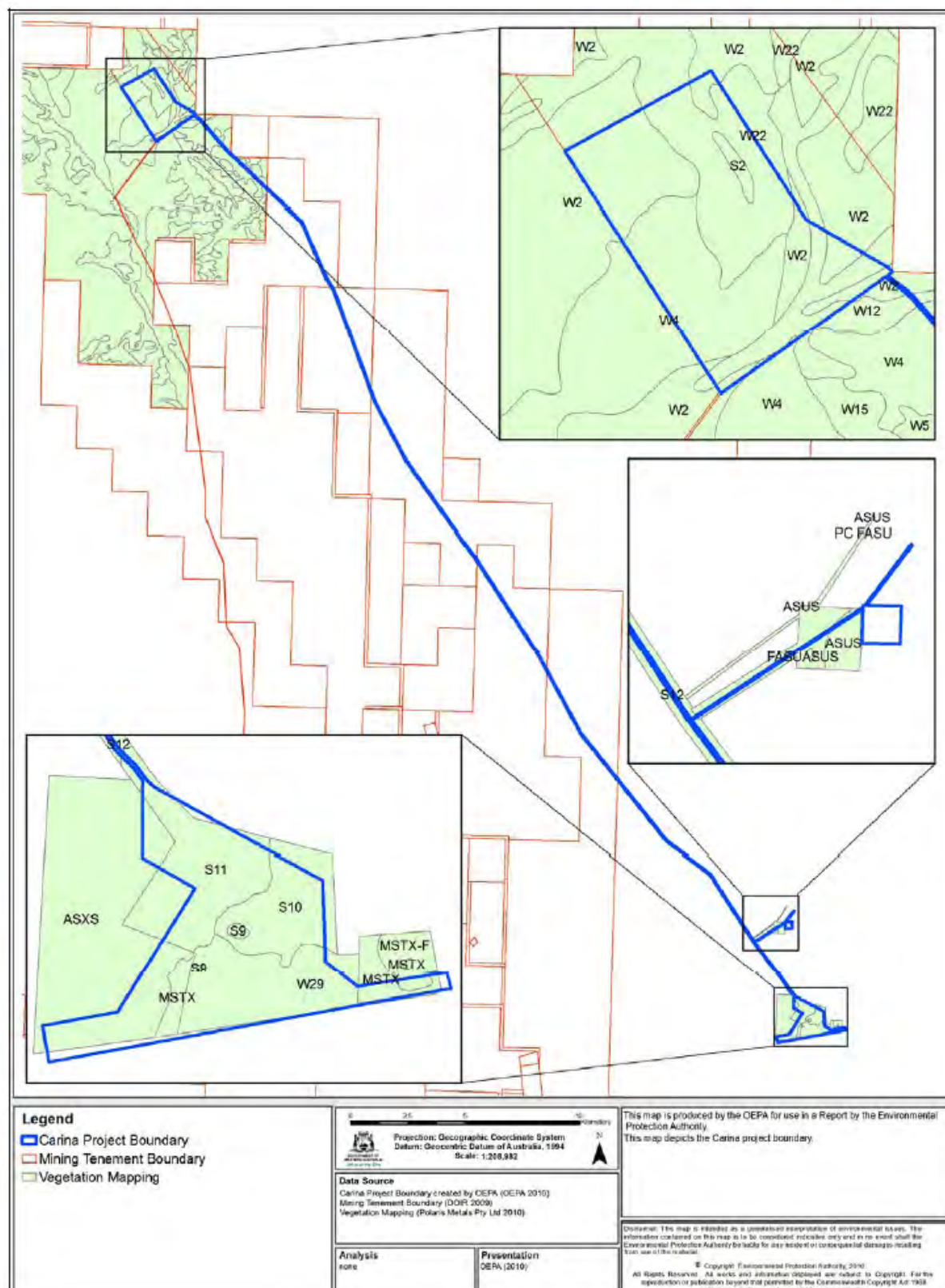


Figure 2 Project boundary

Schedule 2

Eastings	Northings		Eastings	Northings		Eastings	Northings
213556.85	6625719.04		241463.60	6592276.23		241644.88	6588529.20
213510.01	6625681.38		241463.92	6592276.28		241571.59	6588619.43
213704.33	6625546.83		241464.25	6592276.31		241430.15	6588747.00
213704.59	6625546.64		241464.57	6592276.32		241429.94	6588747.21
213705.30	6625546.09		241464.90	6592276.31		241429.30	6588747.86
213705.35	6625546.04		241465.22	6592276.28		241428.71	6588748.56
213776.31	6625485.78		241465.55	6592276.23		241428.40	6588748.97
213776.92	6625485.23		241465.87	6592276.15		240940.47	6589407.98
213777.29	6625484.86		241466.18	6592276.06		239767.11	6590818.04
213826.13	6625434.33		241466.49	6592275.94		239766.92	6590818.29
215008.03	6624211.68		241466.78	6592275.81		239766.47	6590818.87
218457.66	6621262.00		241467.07	6592275.65		237741.57	6593638.43
218458.25	6621261.47		241467.35	6592275.48		235743.55	6594987.09
218458.88	6621260.82		241467.62	6592275.29		235743.13	6594987.38
218459.48	6621260.12		241467.87	6592275.08		235742.42	6594987.94
218460.04	6621259.38		241468.11	6592274.86		235741.76	6594988.54
218460.55	6621258.60		241468.33	6592274.62		235741.12	6594989.20
218461.02	6621257.78		241468.54	6592274.37		235741.01	6594989.32
218461.21	6621257.41		241468.73	6592274.10		231791.02	6599439.32
219660.70	6618858.44		241468.90	6592273.82		231790.53	6599439.90
220010.06	6618359.25		241469.06	6592273.53		231789.97	6599440.64
220010.56	6618358.48		241469.19	6592273.24		231789.46	6599441.42
220011.03	6618357.66		241469.31	6592272.93		231789.43	6599441.48
220011.45	6618356.81		241469.40	6592272.62		229639.75	6602990.95
220011.65	6618356.38		241469.48	6592272.30		226737.49	6606993.61
222061.19	6613507.52		241469.53	6592271.98		226141.87	6607688.31
223560.13	6611009.28		241469.56	6592271.65		226141.55	6607688.69
226160.38	6607709.07		241469.57	6592271.32		226141.49	6607688.77
226756.18	6607014.15		241469.56	6592271.00		223540.47	6610989.96
226756.50	6607013.76		241469.53	6592270.67		223539.97	6610990.62
226756.92	6607013.22		241469.48	6592270.35		223539.46	6610991.40
229659.89	6603009.57		241469.40	6592270.03		223539.39	6610991.53
229660.03	6603009.37		241469.31	6592269.72		222039.37	6613491.54
229660.54	6603008.59		241469.19	6592269.41		222038.98	6613492.23
229660.58	6603008.54		241469.06	6592269.11		222038.56	6613493.09
231809.86	6599459.69		241468.90	6592268.82		222038.37	6613493.52
235757.83	6595011.98		241468.73	6592268.55		219989.03	6618341.87
237756.46	6593662.90		241468.72	6592268.53		219639.95	6618840.65
237756.88	6593662.61		241140.35	6591780.68		219639.45	6618841.41
237757.58	6593662.05		241412.05	6591787.24		219638.98	6618842.23
237758.25	6593661.45		241419.30	6591487.21		219638.79	6618842.60
237758.88	6593660.79		241119.25	6591479.96		218440.15	6621239.88

Eastings	Northings		Eastings	Northings		Eastings	Northings
237759.48	6593660.09		241112.76	6591748.56		214992.21	6624188.10
237759.92	6593659.51		239824.30	6590792.28		214991.63	6624188.63
239785.99	6590838.33		240959.28	6589428.35		214991.26	6624189.00
239817.90	6590799.98		240959.48	6589428.10		213808.91	6625412.12
241112.46	6591760.79		240959.79	6589427.70		213760.54	6625462.16
241112.00	6591779.99		241447.16	6588769.43		213690.59	6625521.56
241128.09	6591780.38		241586.77	6588643.42		213494.02	6625657.69
241460.42	6592274.12		241663.96	6588548.39		213485.47	6625661.60
241460.61	6592274.37		241728.51	6588488.59		213440.02	6625625.03
241460.81	6592274.62		243006.98	6587867.79		213440.03	6625625.02
241461.04	6592274.86		243058.49	6587271.06		211932.66	6624412.25
241461.28	6592275.08		243304.44	6587096.32		211931.28	6624411.15
241461.53	6592275.29		243954.82	6587234.97		210263.06	6626730.97
241461.79	6592275.48		243993.55	6587117.16		211660.80	6627602.53
241462.07	6592275.65		241069.56	6586412.34		212676.00	6626188.00
241462.36	6592275.81		241006.67	6586677.93		213509.26	6625760.33
241462.66	6592275.94		241553.67	6586811.03		213509.26	6625760.33
241462.97	6592276.06		242072.88	6587762.50		213556.85	6625719.04
241463.28	6592276.15		241673.15	6587964.63			

Note: MGA94 Zone 51

Schedule 3

	MGA94 Zone 51								
	Northwest corner		Northeast corner		Southwest corner		Southeast corner		Comment
	Eastings	Northings	Eastings	Northings	mE	mN	mE	mN	
Area 1	241000	6591000	242000	6591000	241000	6590000	242000	6590000	close to village and haul road
Area 2	239000	6590000	240000	6590000	239000	6589000	240000	6589000	close to haul road
Area 3	239000	6595000	240000	6595000	239000	6594000	240000	6594000	2km away from village, not impacted
Area 4	238000	6601000	239000	6601000	238000	6600000	239000	6600000	8km away from village

Attachment 1 to Ministerial Statement 852

Change to proposal under s45C of the *Environmental Protection Act 1986*

Proposal: Carina Iron Ore Mine, Approximately 60 kilometres north-east of Koolyanobbing, Shire of Yilgarn

Proponent: Polaris Metals Pty Ltd

Change: Changes to clearing areas and project boundaries associated with the Rail Siding, Haul Road, and new Powerline Corridor.

Key Characteristics Table: This table replaces Table 1 in Schedule 1

Element	Description of original proposal	Description of approved change to proposal
General		
Project Life	Up to 10 years	Up to 10 years
Area of disturbance	Up to 460 ha comprising: <ul style="list-style-type: none"> • Open pit - 60 ha; • Waste dump - 140 ha; • ROM pad and mine infrastructure 50 ha; • Haul road - 150 ha; • Rail siding and infrastructure - 42.5 ha; • Rail siding borrow pits - 7.5ha; and • Accommodation village and associated infrastructure - 10ha 	Up to 547 ha comprising: <ul style="list-style-type: none"> • Open pit - 60 ha; • Waste dump - 140 ha; • ROM pad and mine infrastructure 50 ha; • Not more than 192 ha for Haul Road infrastructure; • Not more than 67 ha for Rail Siding and infrastructure; • Not more than 23 ha for rail siding borrow pits; • Not more than 5 ha for power line infrastructure; • Accommodation village and associated infrastructure - 10 ha
Resource	21.4 Mt DSO	21.4 Mt DSO
Mining		
Type	Mining of hematite DSO below the water table	Mining of hematite DSO below the water table
Pit	Single open pit with dimensions of 1500 m long, 380 m wide, 170 m deep	Single open pit with dimensions of 1500 m long, 380 m wide, 170 m deep
Mining rate	Up to 4 Mt/a	Up to 4 Mt/a
Waste dump	Single waste dump with dimensions of 1720m long, 810 m wide, 35 m high	Single waste dump with dimensions of 1720m long, 810 m wide, 35 m high
Waste rock	Up to 22.8 million bcm (equivalent 30.8 million lcm)	Up to 22.8 million bcm (equivalent 30.81 million lcm)
Potentially Acid Forming (PAF) material	1 - 2% by volume (PAF material is to be encapsulated in the waste dump)	1 - 2% by volume (PAF material is to be encapsulated in the waste dump)

Element	Description of original proposal	Description of approved change to proposal
Pit dewatering	Up to 411 ML/a (1126 kL/d)	Up to 411 ML/a (1126 kL/d)
Infrastructure		
Water supply	Combination of water sources: <ul style="list-style-type: none"> • Pit dewatering; 	Combination of water sources: <ul style="list-style-type: none"> • Pit dewatering;
	<ul style="list-style-type: none"> • Water from local bores piped to filling stations along the haul road; and • Bores at the rail siding 	<ul style="list-style-type: none"> • Water from local bores piped to filling stations along the haul road; and • Bores at the rail siding
Water consumption	Up to 678 ML/a	Up to 678 ML/a
Power supply	Diesel powered generators at the minesite and main work centre (rail siding)	Diesel powered generators at the minesite and main work centre (rail siding)
Product transportation	Trucked via road from the minesite to the rail siding, then taken via rail to the Port of Fremantle (Kwinana)	Trucked via road from the minesite to the rail siding, then taken via rail to the Port of Fremantle (Kwinana)
Site access	Via the Mt Walton East Intractable Waste Facility (IWF) access road to the rail siding	Via the Mt Walton East Intractable Waste Facility (IWF) access road to the rail siding

Note: Text in **bold** in the Key Characteristics Table, indicates change/s to the proposal.

Abbreviations:

bcm bank cubic metres
DSO direct shipping ore
ha hectare
kL/d kilolitres per day
lcm loose cubic metres

m metre
ML/a million litres per annum
Mt million tonnes
Mt/a million tonnes per annum

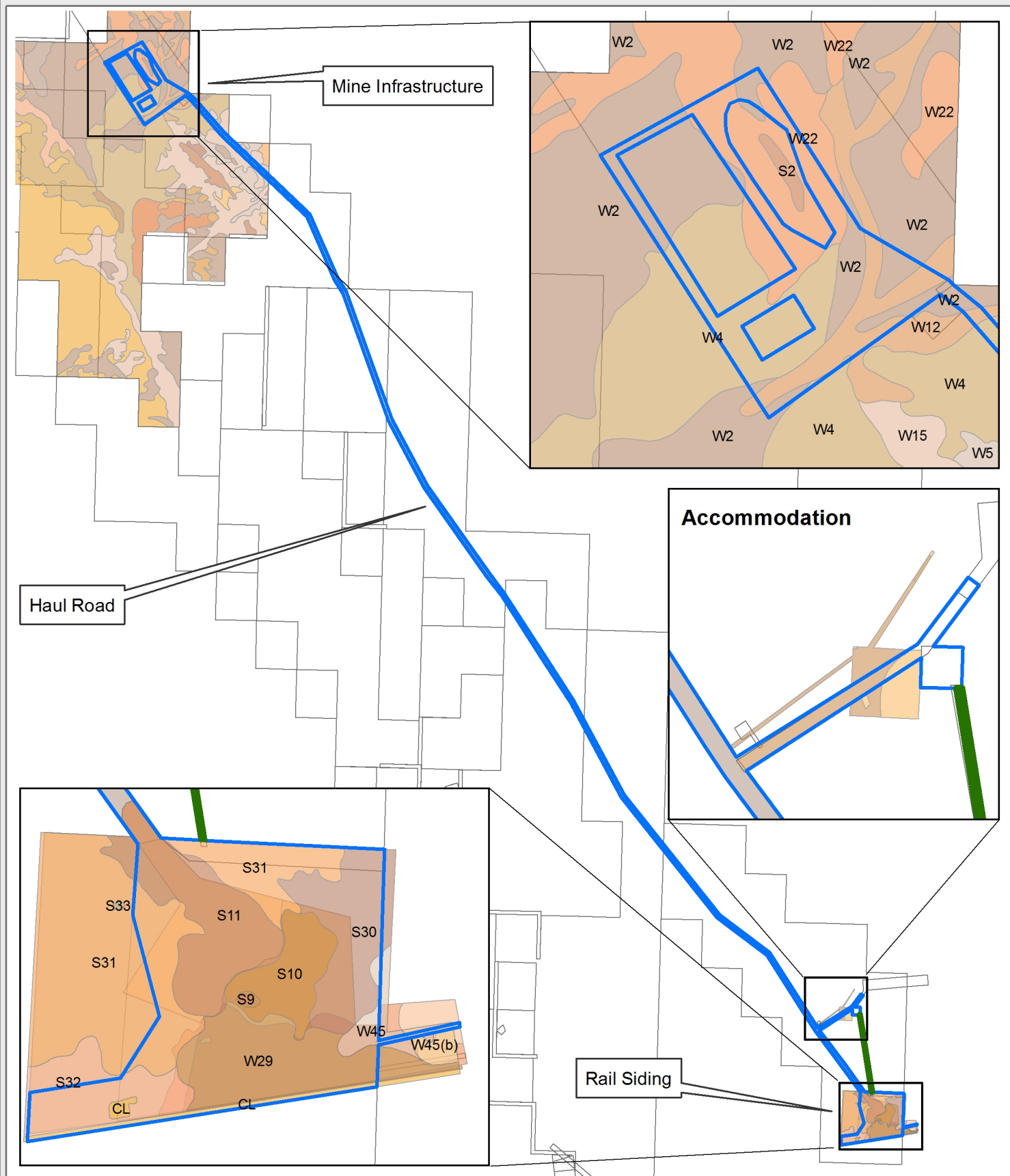
List of Replacement Figures and Schedules

Figure 1 Mine Site Components (replaces Figure 1 of Schedule 1).
Figure 2 Project Boundary (replaces Figure 2 of Schedule 1).
Schedule 2 Project Boundary, Exclusion Boundary, Rail Siding Boundary (Replaces previous Schedule 2).

Dr Paul Vogel
CHAIRMAN
Environmental Protection Authority
under delegated authority

Approval date: 28 June 2012

Figure 1
Carina Iron Ore Mine: Mine Site Components and Project Boundary



Legend

- Carina Project Boundary (2012)
- Powerline Corridor
- Mining Tenement Boundaries (2012)

0 2.5 5 10 Kilometers

Projection: Geographic Coordinate System
 Datum: Geocentric Datum of Australia, 1994
 Scale: 1:200,000

Data Source

Carina Project Boundary and Mine Components
 (Polaris Metals Pty Ltd 2012)
 Mining Tenement Boundary (DMP 2012)
 Vegetation Mapping (Polaris Metals Pty Ltd 2010 & 2012)

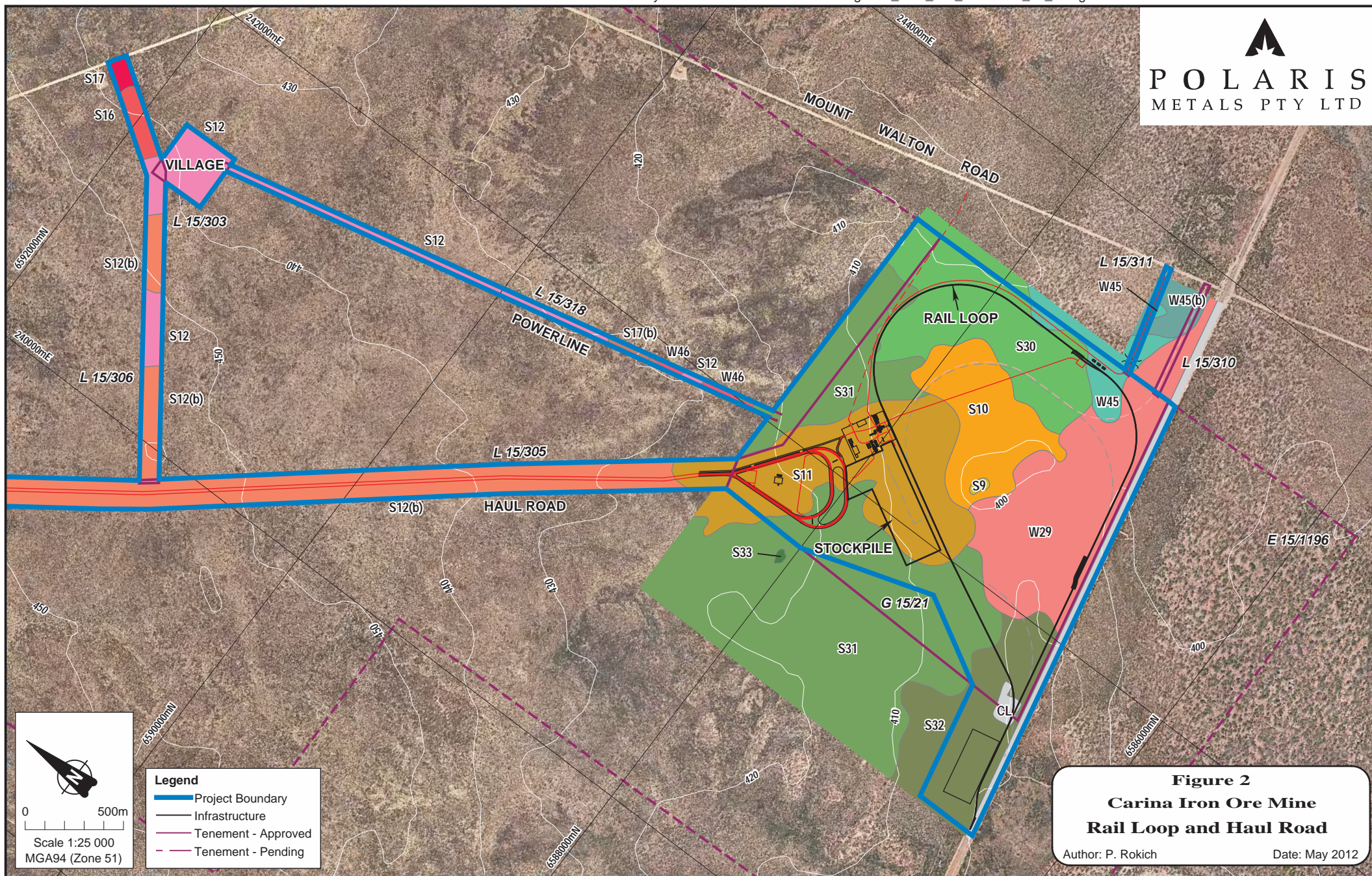
Analysis
 none

Presentation
 OEPA (2012)

This map is produced by the OEPA for use in a Report by the Environmental Protection Authority.
 This map depicts the Carina project boundary and mine site components.

Disclaimer: This map is intended as a generalised interpretation of environmental issues. The information contained on this map is to be considered indicative only and in no event shall the Environmental Protection Authority be liable for any incident or consequential damages resulting from use of the material.

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Schedule 2

Carina Iron Ore Mine

Project Boundary, Exclusion Boundary, Rail Siding Boundary

The co-ordinates defining the *Project Boundary, Exclusion Boundary and Rail Siding Boundary* datasets are prescribed below, noting that the correct recreation of the boundaries requires the sequential connection of the co-ordinates as per its co-ordinate number.

All co-ordinates are listed in Map Grid of Australia Zone 50 (MGA Zone 50), datum of Geodetic Datum of Australia 1994 (GDA94).

PROJECT BOUNDARY

Co-ordinate No.	Easting	Northing	Co-ordinate No.	Easting	Northing
1	787851.68	6627615.48	33	817857.00	6585728.08
2	786413.16	6626821.40	34	817306.17	6585607.17
3	787953.74	6624415.27	35	817347.47	6586910.61
4	789523.42	6625546.27	36	816127.57	6586971.42
5	789523.42	6625546.27	37	815611.98	6589957.66
6	789733.79	6625389.78	38	815646.90	6589956.63
7	790951.26	6623988.50	39	815655.75	6590256.74
8	794231.37	6620867.06	40	815438.65	6590263.14
9	795298.28	6618415.27	41	815774.75	6590708.08
10	795619.94	6617899.14	42	815693.60	6590766.92
11	797408.07	6612948.94	43	815326.74	6590279.50
12	798777.58	6610363.29	44	814023.36	6589441.02
13	801201.91	6606923.53	45	814009.58	6589459.52
14	801762.95	6606193.84	46	812153.40	6592365.54
15	803330.05	6603769.27	47	810224.73	6593823.64
16	804442.35	6602048.64	48	806527.58	6598467.30
17	806401.76	6598384.56	49	804571.72	6602124.83
18	810119.18	6593715.39	50	803433.37	6603885.76
19	812041.47	6592262.10	51	801879.90	6606287.43
20	813790.55	6589523.76	52	801322.74	6607012.47
21	813931.16	6589313.70	53	798905.69	6610441.91
22	815006.49	6587870.58	54	797545.57	6613009.83
23	815629.01	6586996.27	55	795755.60	6617965.23
24	815665.01	6586945.72	56	795431.41	6618485.26
25	815628.44	6586463.83	57	794356.77	6620954.80
26	815809.29	6585769.03	58	791059.58	6624092.41
27	815543.72	6585347.86	59	789900.20	6625426.95
28	814926.13	6585251.73	60	789645.09	6625633.91
29	814907.61	6584917.20	61	789645.09	6625633.94
30	817293.39	6585288.73	62	789599.74	6625677.72
31	817305.25	6585576.38	63	788790.35	6626149.04
32	817860.46	6585698.83			

Schedule 2

EXCLUSION BOUNDARY

Co-ordinate No.	Easting	Northing
1	815820.86	6586986.71
2	815127.71	6587958.90
3	814083.50	6589360.31
4	815353.16	6590181.97
5	815346.77	6589965.48
6	815572.19	6589958.84
7	816087.66	6586973.41

RAIL SIDING BOUNDARY

Co-ordinate No.	Easting	Northing
1	814907.61	6584917.20
2	814926.13	6585251.73
3	815543.72	6585347.86
4	815809.29	6585769.03
5	815628.44	6586463.83
6	815665.01	6586945.72
7	815629.01	6586996.27
8	816127.57	6586971.42
9	817347.47	6586910.61
10	817306.17	6585607.17
11	817857.00	6585728.08
12	817860.46	6585698.83
13	817305.25	6585576.38
14	817293.39	6585288.73

Attachment 2 to Ministerial Statement 852

Change to proposal under s45C of the *Environmental Protection Act 1986*

This Attachment replaces Schedule 1, Schedule 2 and Attachment 1 in Ministerial Statement 852

Proposal: Carina Iron Ore Project

Proponent: Polaris Metals Pty Ltd

The Proposal (Assessment No. 1756)

The proposal is to construct and operate an iron ore mine in the Goldfields region of Western Australia. The proposal involves mining of hematite direct shipping ore (DSO) from a single open pit on the Yendilberin Hills, which form part of the Finnerty Range.

The location of the various project components is shown in Figure 1.

The main characteristics of the proposal are summarised in Table 1 below. A detailed description of the proposal is provided in section 3 of the proponent's Public Environmental Review Carina Iron Ore Mine: Yilgarn Region WA Polaris metals NL (March 2010).

Change: Expansion of existing Carina pit, Waste dump.

Key Characteristics Table: This table replaces Table 1 in Attachment 1

Element	Description of authorised proposal	Description of approved change to proposal
General		
Project Life	Up to 10 years	Up to 10 years
Area of disturbance	Up to 547 ha comprising: <ul style="list-style-type: none">• Open pit - 60 ha;• Waste dump - 140 ha;• ROM pad and mine infrastructure 50 ha;• Not more than 192 ha for Haul Road infrastructure;• Not more than 67 ha for Rail Siding and infrastructure;• Not more than 23 ha for rail siding borrow pits;• Not more than 5 ha for power line infrastructure;• Accommodation village and associated infrastructure - 10 ha	Up to 607.6 ha comprising: <ul style="list-style-type: none">• Open pit – 78.6 ha;• Waste dump - 182 ha;• ROM pad and mine infrastructure 50 ha;• Not more than 192 ha for Haul Road infrastructure;• Not more than 67 ha for Rail Siding and infrastructure;• Not more than 23 ha for rail siding borrow pits;• Not more than 5 ha for power line infrastructure;• Accommodation village and associated infrastructure - 11 ha
Resource	21.4 Mt DSO	Up to 23 Mt DSO

Element	Description of authorised proposal	Description of approved change to proposal
Mining		
Type	Mining of hematite DSO below the water table	Mining of hematite DSO below the water table
Pit	Single open pit with dimensions of 1500 m long, 380 m wide, 170 m deep	Single open pit with dimensions of 1800 m long, 470 m wide, 190 m deep
Mining rate	Up to 4 Mt/a	Up to 6Mt/a
Waste dump	Single waste dump with dimensions of 1720m long, 810 m wide, 35 m high	Single waste dump with dimensions of 1800m long, 850m wide, 52m high
Waste rock	Up to 22.8 million bcm (equivalent 30.81 million lcm)	Up to 35 million bcm (equivalent 47.3 million lcm)
Potentially Acid Forming (PAF) material	1 - 2% by volume (PAF material is to be encapsulated in the waste dump)	1 - 2% by volume (PAF material is to be encapsulated in the waste dump)
Pit dewatering	Up to 411 ML/a (1126 kL/d)	Up to 1.58 GL/a (4,320 kL/d)
Infrastructure		
Water supply	Combination of water sources: <ul style="list-style-type: none"> • Pit dewatering; 	Combination of water sources: <ul style="list-style-type: none"> • Pit dewatering;
	<ul style="list-style-type: none"> • Water from local bores piped to filling stations along the haul road; and • Bores at the rail siding 	<ul style="list-style-type: none"> • Water from local bores piped to filling stations along the haul road; and • Bores at the rail siding
Water consumption	Up to 678 ML/a	Up to 1.85 GL/a
Power supply	Diesel powered generators at the minesite and main work centre (rail siding)	Diesel powered generators at the minesite and main work centre (rail siding)
Product transportation	Trucked via road from the minesite to the rail siding, then taken via rail to the Port of Fremantle (Kwinana)	Trucked via road from the minesite to the rail siding, then taken via rail to the Port of Fremantle (Kwinana)
Site access	Via the Mt Walton East Intractable Waste Facility (IWF) access road to the rail siding	Via the Mt Walton East Intractable Waste Facility (IWF) access road to the rail siding

Note: Text in **bold** in the Key Characteristics Table, indicates change/s to the proposal.

Abbreviations:

bcm bank cubic metres
DSO direct shipping ore
ha hectare
kL/d kilolitres per day
lcm loose cubic metres

m metre
ML/a million litres per annum
Mt million tonnes
Mt/a million tonnes per annum

List of Figures and Schedules

Figure 1	Carina Iron Ore Mine: Mine Site Components and Project Boundary
Figure 2	Rail Loop and Haul Road
Schedule 2	Project Boundary Co-ordinates

[Signed on 11 October 2013]

Dr Paul Vogel

CHAIRMAN

Environmental Protection Authority

under delegated authority

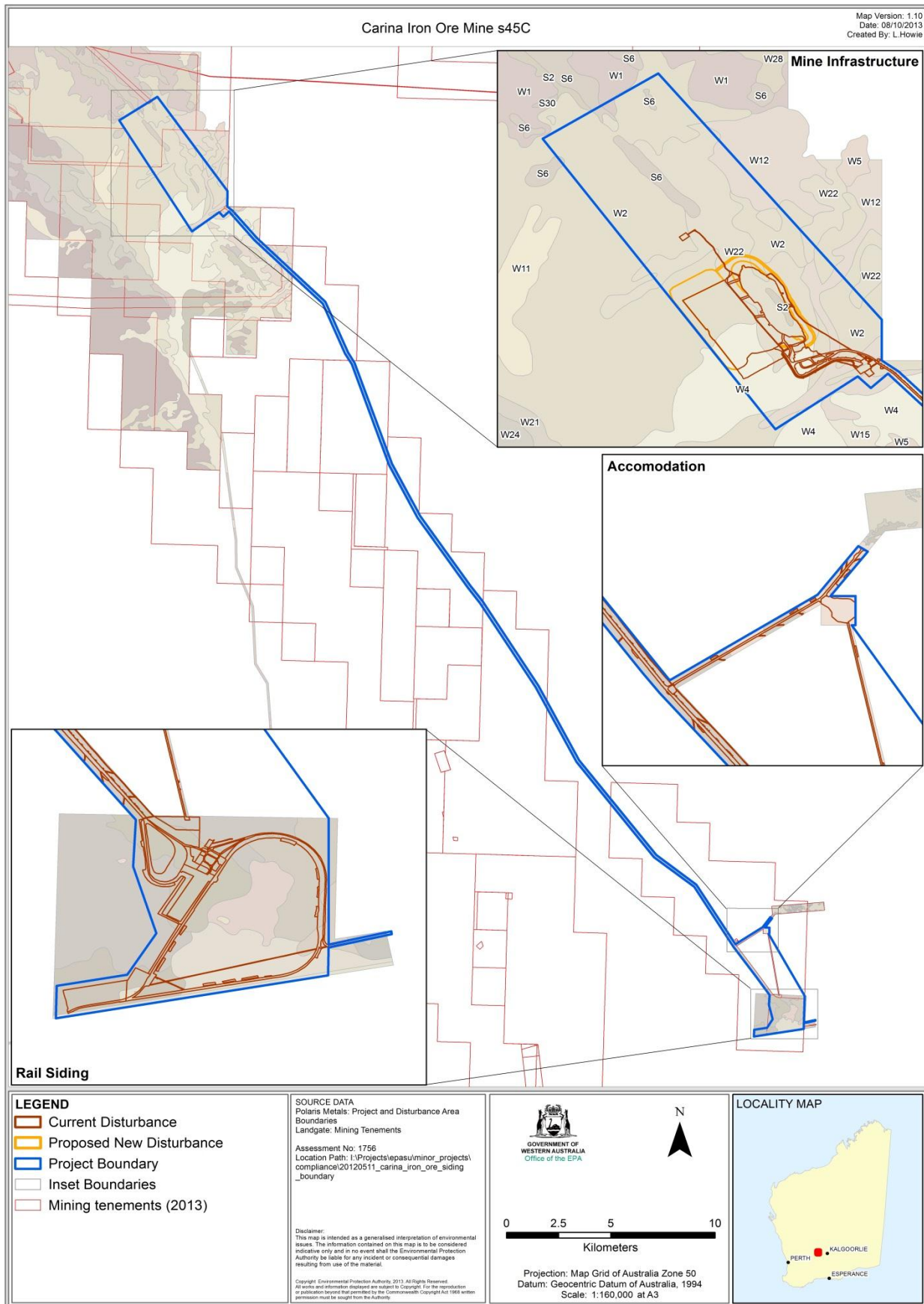
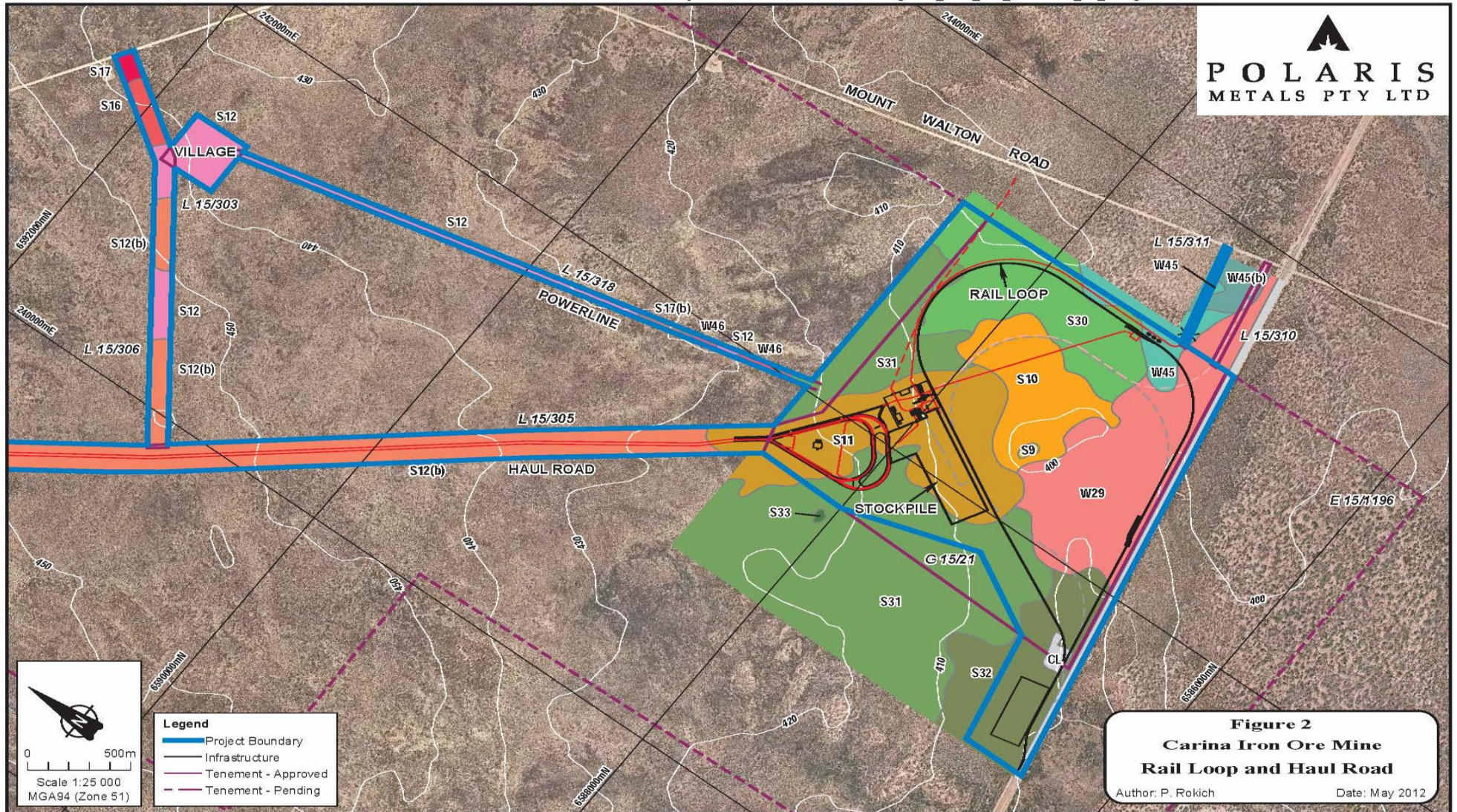


Figure 1 – Carina Iron Ore Mine: Mine Site Components and Project Boundary



Schedule 2

Carina Iron Ore Mine

Project Boundary, Exclusion Boundary, Rail Siding Boundary

The co-ordinates defining the *Project Boundary, Exclusion Boundary and Rail Siding Boundary* datasets are prescribed below, noting that the correct recreation of the boundaries requires the sequential connection of the co-ordinates as per its co-ordinate number.

All co-ordinates are listed in Map Grid of Australia Zone 50 (MGA Zone 50), datum of Geodetic Datum of Australia 1994 (GDA94).

PROJECT BOUNDARY

Co-ordinate No.	Easting	Northing	Co-ordinate No.	Easting	Northing
1	789645.09	6625633.91	33	815543.72	6585347.86
2	789900.20	6625426.95	34	815809.29	6585769.03
3	791059.58	6624092.41	35	815628.44	6586463.83
4	794356.77	6620954.80	36	815665.01	6586945.72
5	795431.41	6618485.26	37	815629.01	6586996.27
6	795755.60	6617965.23	38	815006.49	6587870.58
7	797545.57	6613009.83	39	813931.16	6589313.70
8	798905.69	6610441.91	40	813790.55	6589523.76
9	801322.74	6607012.47	41	812041.47	6592262.10
10	801879.90	6606287.43	42	810119.18	6593715.39
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12	804571.72	6602124.83	44	804442.35	6602048.64
13	806527.58	6598467.30	45	803330.05	6603769.27
14	810224.73	6593823.64	46	801762.95	6606193.84
15	812153.40	6592365.54	47	801201.91	6606923.53
16	814009.58	6589459.52	48	798777.58	6610363.29
17	814023.36	6589441.02	49	797408.07	6612948.94
18	815326.74	6590279.50	50	795619.94	6617899.14
19	815693.60	6590766.92	51	795298.28	6618415.27
20	815774.75	6590708.08	52	794231.37	6620867.06
21	815438.65	6590263.14	53	790951.26	6623988.50

22	815655.75	6590256.74	54	789733.79	6625389.78
23	815646.90	6589956.63	55	789460.90	6625131.70
24	815611.98	6589957.66	56	789260.59	6625350.79
25	817347.47	6586910.61	57	787952.81	6624411.11
26	817306.17	6585607.17	58	784464.63	6629854.48
27	817857.00	6585728.08	59	786299.24	6631010.46
28	817860.46	6585698.83	60	789664.73	6626385.47
29	817305.25	6585576.38	61	789645.09	6625633.91
30	817293.39	6585288.73			
31	814907.61	6584917.20			
32	814926.13	6585251.73			

EXCLUSION BOUNDARY

Co-ordinate No.	Easting	Northing
1	815820.86	6586986.71
2	815127.71	6587958.90
3	814083.50	6589360.31
4	815353.16	6590181.97
5	815346.77	6589965.48
6	815572.19	6589958.84
7	816087.66	6586973.41

RAIL SIDING BOUNDARY

Co-ordinate No.	Easting	Northing
1	814907.61	6584917.20
2	814926.13	6585251.73
3	815543.72	6585347.86
4	815809.29	6585769.03
5	815628.44	6586463.83
6	815665.01	6586945.72
7	815629.01	6586996.27
8	816127.57	6586971.42
9	817347.47	6586910.61
10	817306.17	6585607.17
11	817857.00	6585728.08
12	817860.46	6585698.83
13	817305.25	6585576.38
14	817293.39	6585288.73

Attachment 3 to Ministerial Statement 852

Change to proposal under s45C of the *Environmental Protection Act 1986*

This Attachment replaces Schedule 1, Schedule 2, Attachment 1 and Attachment 2 in Ministerial Statement 852

Proposal: Carina Iron Ore Project

Proponent: Polaris Metals Pty Ltd

The Proposal (Assessment No. 1756)

The proposal is to construct and operate an iron ore mine in the Goldfields region of Western Australia. The proposal involves mining of hematite direct shipping ore (DSO) from a single open pit on the Yendilberin Hills, which form part of the Finnerty Range.

The location of the various project components is shown in Figure 1.

The main characteristics of the proposal are summarised in Table 1 below. A detailed description of the proposal is provided in section 3 of the proponent's Public Environmental Review Carina Iron Ore Mine: Yilgarn Region WA Polaris metals NL (March 2010).

Change: Expansion of existing Carina pit, Waste dump.

Table 1 - Key Characteristics Table: This table replaces Table 1 in Attachment 1 and 2

Element	Description of authorised proposal	Description of approved change to proposal
General		
Project Life	Up to 10 years	Up to 10 years
Area of disturbance	Up to 607.6 ha comprising: <ul style="list-style-type: none">• Open pit – 78.6 ha;• Waste dump - 182 ha;• ROM pad and mine infrastructure 50 ha;• Not more than 192 ha for Haul Road infrastructure;• Not more than 67 ha for Rail Siding and infrastructure;• Not more than 23 ha for rail siding borrow pits;• Not more than 5 ha for power line infrastructure;• Accommodation village and associated infrastructure - 11 ha	Up to 793 ha comprising: <ul style="list-style-type: none">• Open pits – 103 ha;• Waste dumps - 236 ha;• ROM pads and mine infrastructure 103 ha;• Not more than 245 ha for Haul Road infrastructure;• Not more than 67 ha for Rail Siding and infrastructure;• Not more than 23 ha for rail siding borrow pits;• Not more than 5 ha for power line infrastructure;• Accommodation village and associated infrastructure - 11 ha
Resource	23 Mt DSO	Up to 25 Mt DSO

Element	Description of authorised proposal	Description of approved change to proposal
Mining		
Type	Mining of hematite DSO below the water table	Mining of goethite DSO below the water table
Pit	Single open pit with dimensions of 1800 m long, 470 m wide, 190 m deep	Two open pits with dimensions of: <ul style="list-style-type: none"> • Carina - 1800 m long, 470 m wide, 190 m deep • Carina Extended – 1000 m long, 350 m wide, 160 m deep
Mining rate	Up to 4 Mt/a	Up to 6Mt/a
Waste dump	Single waste dump with dimensions of 1800m long, 850m wide, 52m high	Two waste dumps with dimensions of: <ul style="list-style-type: none"> • Carina - 1800m long, 850m wide, 52m high • Carina Extended – 1200 m long, 550 m wide, 25 m high
Waste rock	Up to 35 million bcm (equivalent 47.3 million lcm)	Up to 41.8 million bcm (equivalent 56.4 million lcm)
Potentially Acid Forming (PAF) material	1 - 2% by volume (PAF material is to be encapsulated in the waste dump)	1 - 2% by volume (PAF material is to be encapsulated in the waste dump)
Pit dewatering	Up to 1.58 GL/a (4,320 kL/d)	Up to 1.58 GL/a (4,320 kL/d)
Vegetation Clearing	-	Up to 89.5 ha of W22 vegetation community Up to 8.6 ha of S2 vegetation community
Infrastructure		
Water supply	Combination of water sources: <ul style="list-style-type: none"> • Pit dewatering; 	Combination of water sources: <ul style="list-style-type: none"> • Pit dewatering;
	<ul style="list-style-type: none"> • Water from local bores piped to filling stations along the haul road; and • Bores at the rail siding 	<ul style="list-style-type: none"> • Water from local bores piped to filling stations along the haul road; and • Bores at the rail siding
Water consumption	Up to 1.85 GL/a	Up to 1.85 GL/a
Power supply	Diesel powered generators at the minesite and main work centre (rail siding)	Diesel powered generators at the minesite and main work centre (rail siding)
Product transportation	Trucked via road from the minesite to the rail siding, then taken via rail to the Port of Fremantle (Kwinana)	Trucked via road from the minesite to the rail siding, then taken via rail to the Port of Fremantle (Kwinana)
Site access	Via the Mt Walton East Intractable Waste Facility (IWF) access road to the rail siding	Via the Mt Walton East Intractable Waste Facility (IWF) access road to the rail siding

Note: Text in **bold** in the Key Characteristics Table, indicates change/s to the proposal.

Abbreviations:

bcm bank cubic metres

m metre

DSO direct shipping ore

ML/a million litres per annum

ha hectare

Mt million tonnes

kL/d kilolitres per day

Mt/a million tonnes per annum

lcm loose cubic metres

List of Figures and Schedules

Figure 1 Carina Iron Ore Mine: Mine Site Components and Project Boundary

Figure 2 Rail Loop and Haul Road

Schedule 2 Project Boundary Co-ordinates

[Signed 13 December 2013]

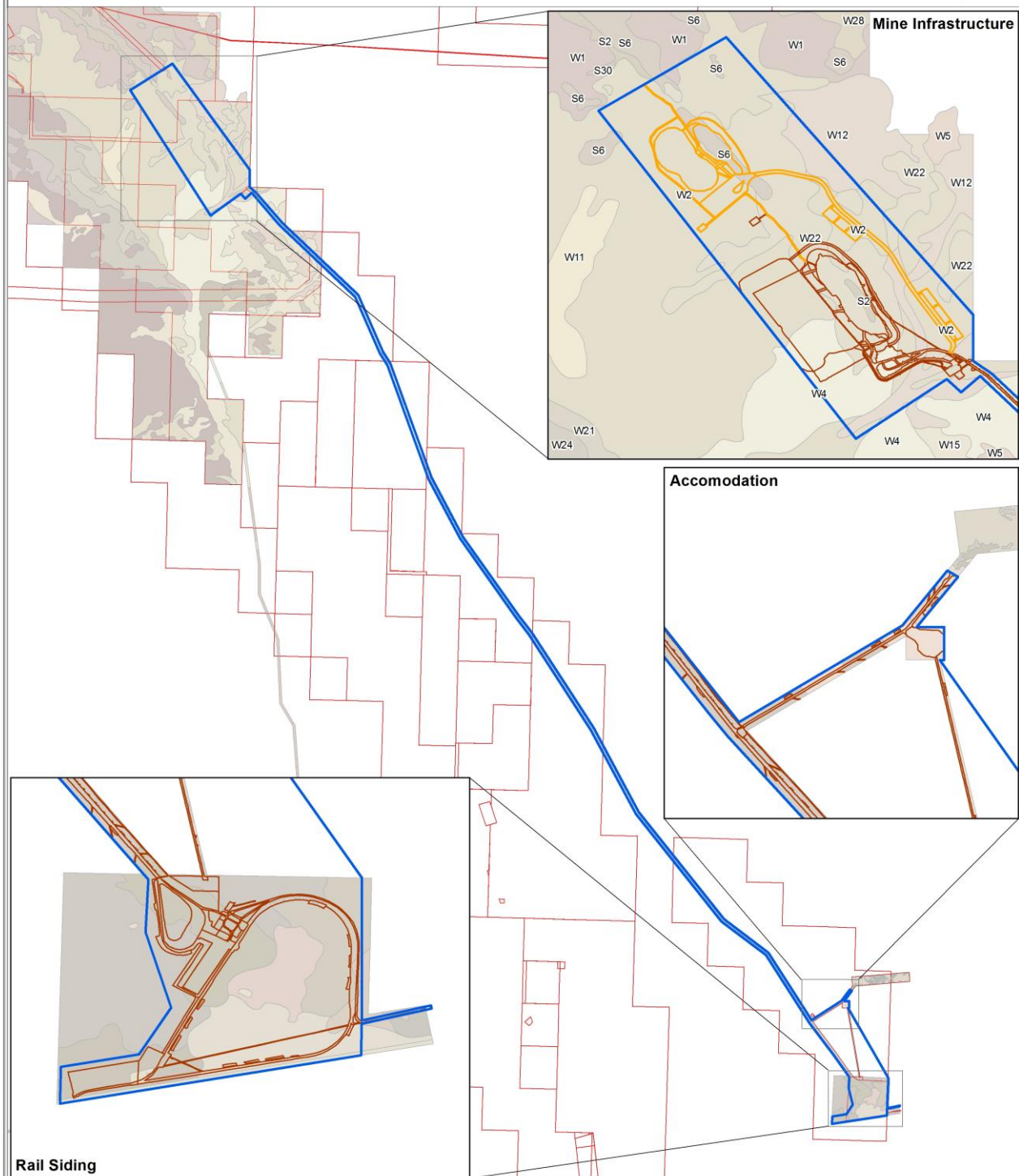
Dr Paul Vogel

CHAIRMAN

Environmental Protection Authority
under delegated authority

Figure 1 - Carina Iron Ore Mine: Minesite Components & Project Boundary

Map Version: 1.11
Date: 28/10/2013
Created By: GIS Section



Rail Siding

LEGEND

- Approved Disturbance Footprint
- Proposed Disturbance Footprint
- Project Boundary
- Inset Boundaries
- Mining tenements (2013)

SOURCE DATA
Polaris Metals: Project and Disturbance Area
Boundaries
Landgate: Mining Tenements

Assessment No: 1756
Location Path: I:\Projects\lepus\minor_projects\compliance\20120511_carina_iron_ore_siding_boundary

Disclaimer:
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Office of the EPA

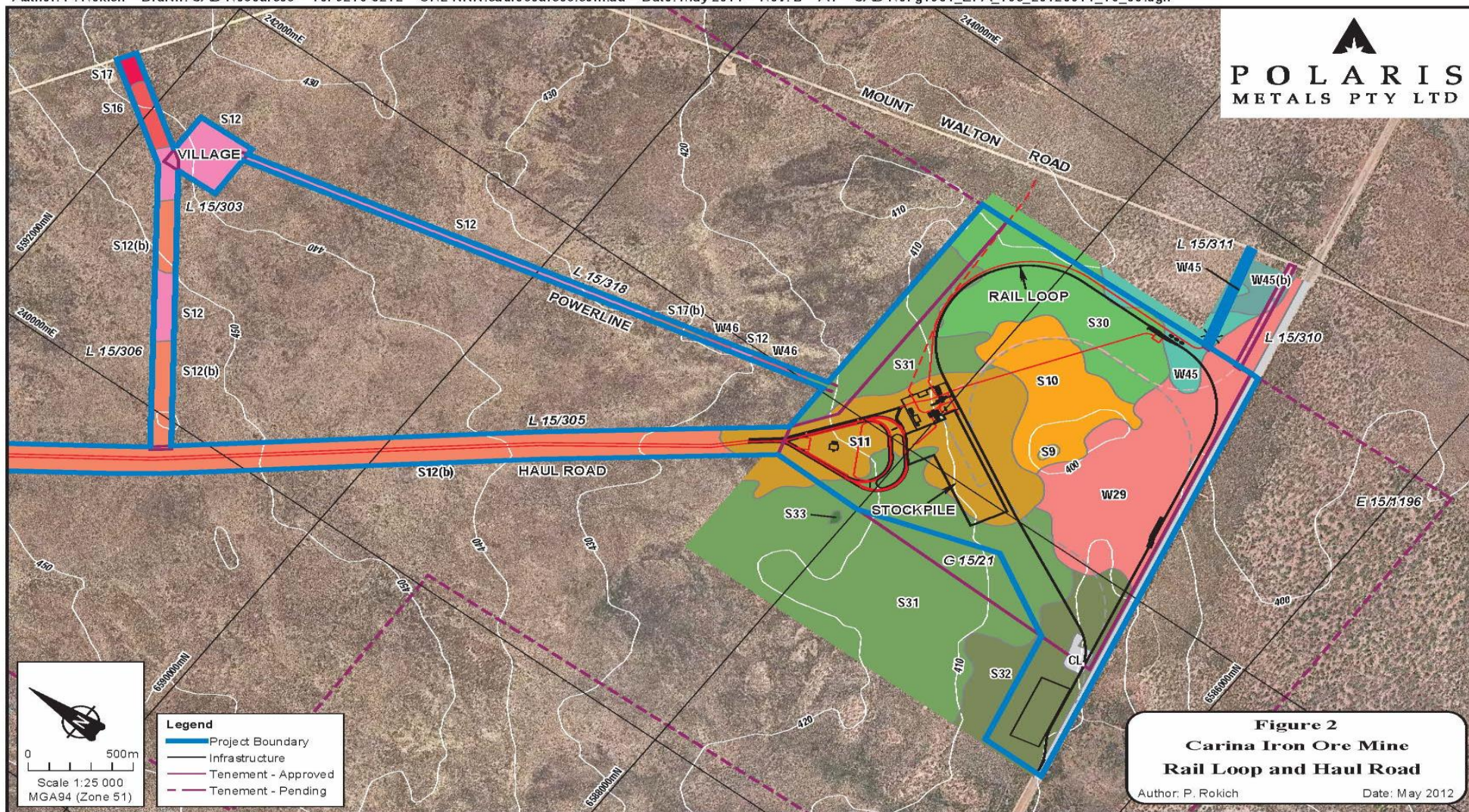


0 2.5 5 10
Kilometers

Projection: Map Grid of Australia Zone 50
Datum: Geocentric Datum of Australia, 1994
Scale: 1:160,000 at A3

LOCALITY MAP





Schedule 2

Carina Iron Ore Mine

Project Boundary, Exclusion Boundary, Rail Siding Boundary

The co-ordinates defining the *Project Boundary, Exclusion Boundary and Rail Siding Boundary* datasets are prescribed below, noting that the correct recreation of the boundaries requires the sequential connection of the co-ordinates as per its co-ordinate number.

All co-ordinates are listed in Map Grid of Australia Zone 50 (MGA Zone 50), datum of Geodetic Datum of Australia 1994 (GDA94).

PROJECT BOUNDARY

Co-ordinate No.	Easting	Northing	Co-ordinate No.	Easting	Northing
1	789645.09	6625633.91	33	815543.72	6585347.86
2	789900.20	6625426.95	34	815809.29	6585769.03
3	791059.58	6624092.41	35	815628.44	6586463.83
4	794356.77	6620954.80	36	815665.01	6586945.72
5	795431.41	6618485.26	37	815629.01	6586996.27
6	795755.60	6617965.23	38	815006.49	6587870.58
7	797545.57	6613009.83	39	813931.16	6589313.70
8	798905.69	6610441.91	40	813790.55	6589523.76
9	801322.74	6607012.47	41	812041.47	6592262.10
10	801879.90	6606287.43	42	810119.18	6593715.39
11	803433.37	6603885.76	43	806401.76	6598384.56
12	804571.72	6602124.83	44	804442.35	6602048.64
13	806527.58	6598467.30	45	803330.05	6603769.27
14	810224.73	6593823.64	46	801762.95	6606193.84
15	812153.40	6592365.54	47	801201.91	6606923.53
16	814009.58	6589459.52	48	798777.58	6610363.29
17	814023.36	6589441.02	49	797408.07	6612948.94
18	815326.74	6590279.50	50	795619.94	6617899.14
19	815693.60	6590766.92	51	795298.28	6618415.27
20	815774.75	6590708.08	52	794231.37	6620867.06
21	815438.65	6590263.14	53	790951.26	6623988.50

22	815655.75	6590256.74	54	789733.79	6625389.78
23	815646.90	6589956.63	55	789460.90	6625131.70
24	815611.98	6589957.66	56	789260.59	6625350.79
25	817347.47	6586910.61	57	787952.81	6624411.11
26	817306.17	6585607.17	58	784464.63	6629854.48
27	817857.00	6585728.08	59	786299.24	6631010.46
28	817860.46	6585698.83	60	789664.73	6626385.47
29	817305.25	6585576.38	61	789645.09	6625633.91
30	817293.39	6585288.73			
31	814907.61	6584917.20			
32	814926.13	6585251.73			

EXCLUSION BOUNDARY

Co-ordinate No.	Easting	Northing
1	815820.86	6586986.71
2	815127.71	6587958.90
3	814083.50	6589360.31
4	815353.16	6590181.97
5	815346.77	6589965.48
6	815572.19	6589958.84
7	816087.66	6586973.41

RAIL SIDING BOUNDARY

Co-ordinate No.	Easting	Northing
1	814907.61	6584917.20
2	814926.13	6585251.73
3	815543.72	6585347.86
4	815809.29	6585769.03
5	815628.44	6586463.83
6	815665.01	6586945.72
7	815629.01	6586996.27
8	816127.57	6586971.42
9	817347.47	6586910.61
10	817306.17	6585607.17
11	817857.00	6585728.08
12	817860.46	6585698.83
13	817305.25	6585576.38
14	817293.39	6585288.73