Materials Stockpiling and Handling Facilities, Cape Preston

Korean Steel Pty Ltd

Report and recommendations
of the Environmental Protection Authority

Environmental Protection Authority
Perth, Western Australia
Bulletin 1229
September 2006

Environmental Impact Assessment Process Timelines

Date	Progress stages	Time (weeks)
06/04/06	**Referral received**	
11/09/06	**ARI Level of Assessment set and EPA report to the Minister for the Environment**	**22**

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Contents

1. Introduction and background

This report provides the advice and recommendations of the Environmental Protection Authority (EPA) to the Minister for the Environment on the environmental factors relevant to the proposal by Korean Steel Pty Ltd (Korean Steel) to establish materials stockpiling and handling facilities with a capacity of approximately 4 million tonnes at Cape Preston, approximately 60km west-south-west of Dampier.

There is some history behind this proposal, specifically related to a previous proposal by Austeel Pty Ltd (Austeel) for the Cape Preston Iron Ore Mine, Downstream Processing (Direct-reduced and Hot-Briquetted Iron) and Port Construction project. In December 2000, Austeel submitted a public environmental review (PER) document to the EPA regarding the Cape Preston iron ore mine and downstream processing. Mineralogy Pty Ltd (Mineralogy), the main shareholder in Austeel, holds the mining leases to the George Palmer Ore Deposit as well as the port facilities and infrastructure. Mineralogy granted Austeel the right to use part of its tenements for the development and operation of the proposal. The EPA released its bulletin on Austeel's proposal in July 2002 (EPA, 2002). The Minister for the Environment approved the proposal subject to the conditions in Ministerial Statement No. 635 on 20 October 2003. Ministerial Statement No. 635 reflects the fact that Mineralogy replaced Austeel as the proponent for the proposal.

In July 2005, Korean Steel submitted a proposal to the EPA regarding Materials Stockpiling and Handling Facilities at Cape Preston (Mineralogy Pty Ltd, July 2005). This proposal related to an increase of 4 million tonnes to the existing stockpile capacity at Cape Preston, the stockpiling of additional materials, and the transfer of responsibility for the port and stockyard operations from Mineralogy to Korean Steel. The referral from Korean Steel was found to be lacking information on the additional materials and their potential environmental impacts. As more information was not forthcoming, and in view of the proponent's request to set the level of assessment without delay, the level of assessment was set at PER. The proponent appealed against this decision on the grounds of the similarity between the new proposal and the previously assessed proposal. The proponent provided the Appeals Convenor with further information regarding the additional materials and their environmental impacts, and indicated that Korean Steel would not take over responsibility for the remaining port area. Following this, the Minister for the Environment remitted the proposal to the EPA for a fresh decision on the level of assessment, on the understanding that Korean Steel would provide the EPA with the additional information in a new referral document.

The proponent submitted a new referral document setting out the details of the proposal, potential environmental impacts and commitments to manage those impacts. The EPA has therefore determined under Section 40(1) of the *Environmental Protection Act, 1986* that the level of assessment for the proposal is Assessment on Referral Information, and this report provides the EPA advice and recommendations in accordance with Section 44(1) of the *Environmental Protection Act, 1986*.

2. The proposal

Korean Steel proposes to establish materials stockpiling and handling facilities with a capacity of approximately 4 million tonnes at Cape Preston, approximately 60km west-south-west of Dampier (Figure 1).

The proposal involves the:

- management, movement, and handling of materials and goods within Mineralogy's Cape Preston stockyard area, as well as areas proposed for desalination facilities and the future expansion of the port;
- movement of products from the expanded stockyard area to the port at Cape Preston; and
- export of product through the port.

Infrastructure required for the proposal such as power, water supply, conveyors, and other facilities required for the movement of materials and product will be provided by third parties, and do not form part of this proposal.

Mineralogy's currently approved Cape Preston stockyard area has a nominal capacity of about 1 million tonnes. The total capacity of the stockpiling and materials handling facilities at Cape Preston would increase to approximately 5 million tonnes with the addition of Korean Steel's proposed materials stockpiling and handling facilities. Mineralogy will retain responsibility for its 1 million tonne stockpile. Korean Steel's additional stockyard capacity will be obtained through extensions to the west, east, and south of Mineralogy's stockyard as illustrated in Figure 2. The extensions will result in the area covered by the stockyards increasing by 20ha to about 45ha. The stockpiles will be about 45m wide in 5m deep canyons. Some of the stockpile area will be used for the storage of miscellaneous incoming materials. A site plan of the Cape Preston stockyard area is provided in Figure 3.

Materials and product from processing sites and/or mines, and/or third party operations will be delivered to the stockpile area by overland conveyor systems, roads, and/or railways. The proposal does not include any overland conveyor system, roads, and/or railways. Additional conveyors will be required within the stockpile area to service the additional stacker and reclaimer. The ship-loader and out-loading materials handling conveyors will have a nominal capacity of up to 10,000 tonnes per hour.

A detailed description of the proposal and its associated environmental impacts can be found in the proponent's referral document (Mineralogy Pty Ltd, 2006). A summarised description of the proposal is included in Table 1 below.

Table 1: Summarised description of the proposal

Element	Description
Stockpile capacity.	4 million tonnes.
Stockpile area.	20 hectares.
Stockpile dimensions.	Approximately 45m wide in 5m deep canyons.
Materials that will be handled.	Hot briquetted iron (HBI). Iron ore pellets. Direct reduction (DR) grade magnetite concentrate. Blast furnace (BF) grade magnetite concentrate. Blended iron ore products. Iron ore - Cane River, Brockman Lump, Brockman Fines, Marra Mamba, Pisolitic, blended ore, and fines. Miscellaneous - mainly construction materials and small quantities of oil and grease.
Ship-loader and out-loading materials handling conveyors.	Nominal capacity of up to 10,000 tonnes per hour.
Reclaimer.	Rail mounted with a slewing/luffing boom. Belt will be reversible for stacking. Nominal capacity of up to 10,000 tonnes per hour.
Stacker.	Rail mounted with a slewing/luffing boom. Belt will be reversible for reclaiming. Nominal capacity of up to 10,000 tonnes per hour.

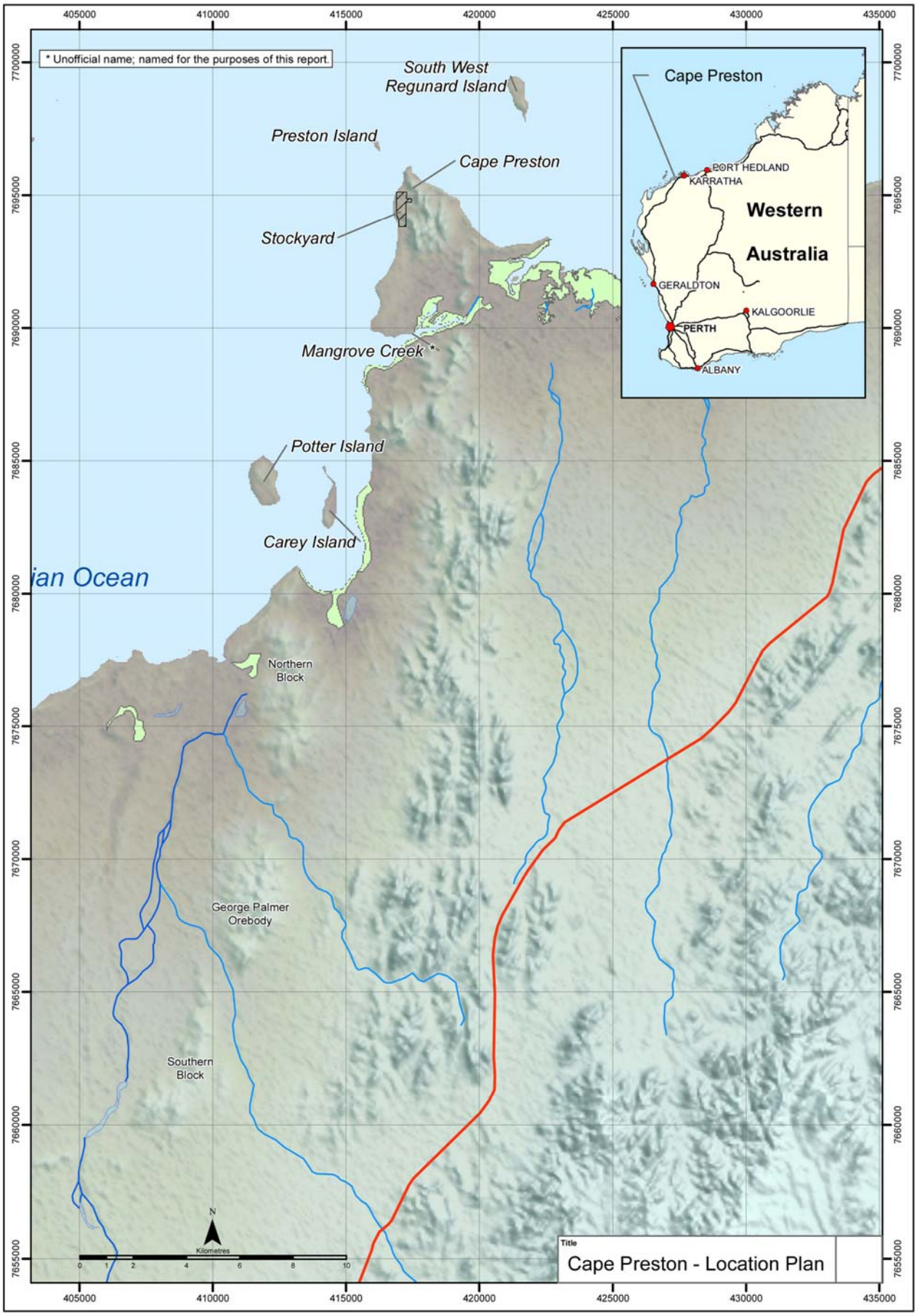

Figure 1: Regional location (Source: Figure 1 from Mineralogy Pty Ltd, 2006)

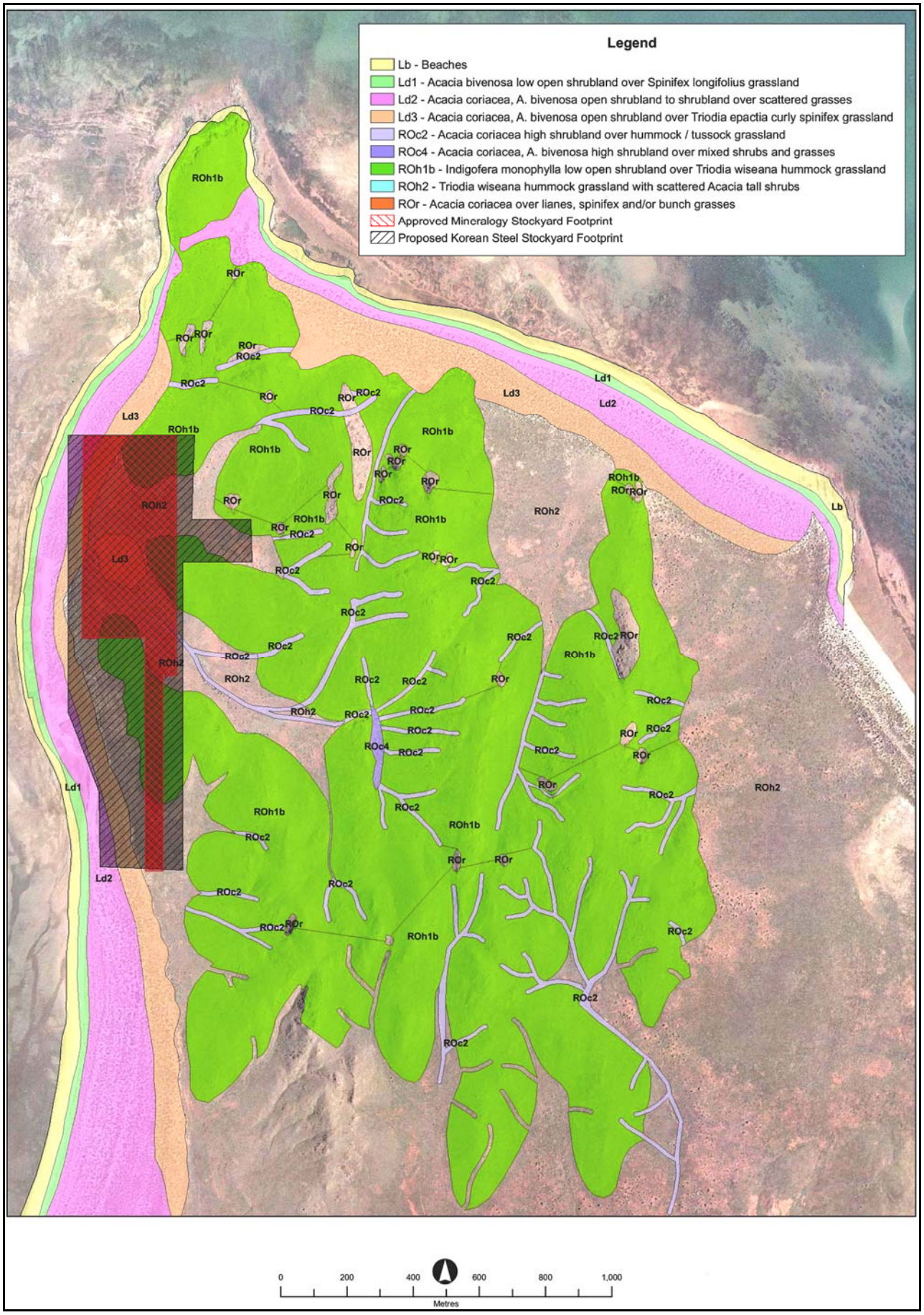

Figure 2: ***Location plan with proposed Korean Steel stockyard footprint and approved Mineralogy stockyard footprint [Source: Figure 2 from Mineralogy Pty Ltd, 2006 (modified)]***

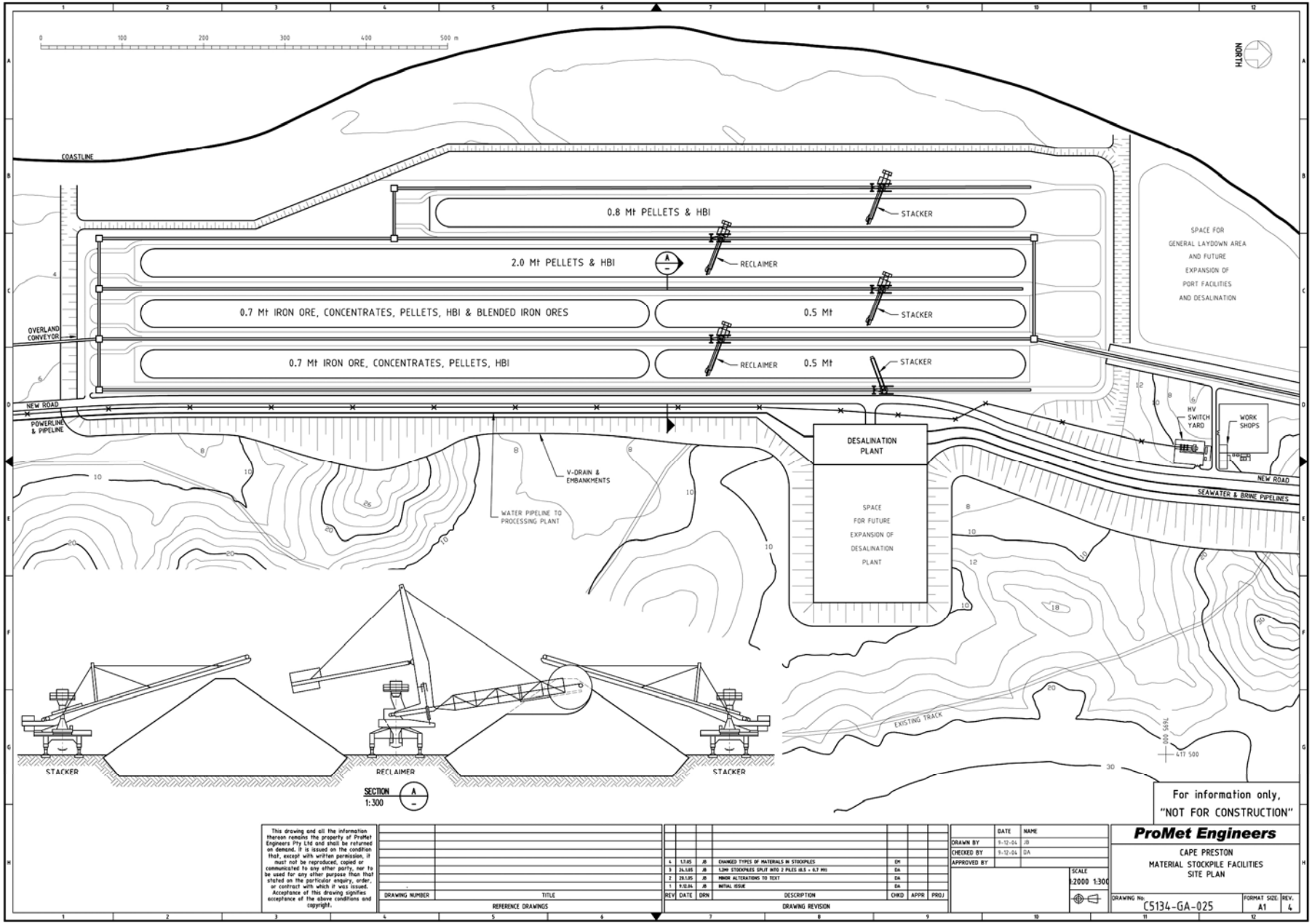

Figure 3: Cape Preston stockyard area site plan (Source: Figure 3 from Mineralogy Pty Ltd, 2006)

3. Consultation

The proponent has advised that the following stakeholders have been consulted in regard to the proposal:

- Minister for State Development and his Chief of Staff;
- Representatives from the Department of Industry and Resources;
- Holder of Mardi Station pastoral lease and a local pastoralist (Mr Thompson);
- Council officers and the Chief Executive Officer from the Shire of Roebourne;
- Executives from the Pilbara Native Title Service, members of Aboriginal groups, and local individual Aboriginal people, including elder Wilfred Hicks;
- Members of the Karratha community;
- Representative(s) from the Fortescue Road House; and
- Representatives from major business establishments in Karratha.

The proponent also advised that on 22 June 2005 copies of an Information Memorandum regarding the proposal were provided to the following stakeholders:

- Pilbara Development Commission;
- Shire of Roebourne;
- Department of Conservation and Land Management (CALM);
- Department of Industry and Resources;
- Water Corporation;
- Department of Indigenous Affairs; and
- Department of Planning and Infrastructure - Crown Lands.

Only one significant concern was raised in the feedback received on the Information Memorandum from the above mentioned stakeholders. The Department of Indigenous Affairs indicated that the statement of approval should include a specific condition requiring full ethnographic and archaeological studies of the areas to be impacted by the proposed development to be undertaken prior to the commencement of construction.

4. Relevant environmental factors

Section 44 of the *Environmental Protection Act, 1986* requires the EPA to report to the Minister for the Environment on the environmental factors relevant to the proposal and the conditions and procedures, if any, to which the proposal should be subject, if implemented. In addition, the EPA may make recommendations as it sees fit.

It is the EPA's opinion that the following environmental factors relevant to the proposal require evaluation in this report:

(a) Dust;

(b) Turtles;

(c) Vegetation;

(d) Marine environment;

(e) Heritage issues; and

(f) Stockyard drainage.

Details of the relevant environmental factors and their assessment are contained in Sections 4.1 - 4.6. The description of each factor shows why it is relevant to the proposal and how it will be affected by the proposal. The assessment of each factor is where the EPA decides whether or not a proposal meets the environmental objective set for that factor.

4.1 Dust

Description

Construction and operation of the proposed materials stockpiling and handling facilities have the potential to generate dust.

Assessment

The area considered for assessment of this factor is the Cape Preston area.

The EPA's environmental objectives for this factor are to:

- ensure that dust emissions do not adversely affect the environment or health, welfare and amenity of nearby land users by meeting statutory requirements and acceptable standards;
- protect the marine environment, sandy beaches, and dunes in the Cape Preston area from dust; and
- ensure that all reasonable and practicable measures are used to minimise the discharge of dust prior to the finalisation of detailed engineering design.

The EPA notes that the proponent has made a commitment to prepare a Dust Management Plan. The Dust Management Plan will contain plans, guidelines and procedures to minimise and manage any dust generated by the project.

Given the adjacent location of the proponent's stockpiles and other facilities to Mineralogy's stockpiles and facilities, there is the potential for dust emissions to emanate from either Korean Steel's operations or from Mineralogy's operations, or from a combination of both.

Should impacts from dust occur, they need to be attributable to the responsible proponent, either Korean Steel or Mineralogy, or apportioned between them. The EPA notes that in determining the proportion of dust attributable to the proponent's operations, it is necessary for the proponent to be able to identify from dust samples, characteristics which distinguish between the various materials that are stockpiled by each party. This would allow the responsibility for the dust impacts to be determined and corrective and appropriate regulatory action to be taken, if necessary.

The EPA notes that there are no regulatory criteria pertaining to dust deposition that are mandated for use within Western Australia. The EPA also notes that there are currently no residential premises located in the Cape Preston area at which the National Environment Protection Measure (NEPM) for ambient air quality standard for PM_{10} particulate emissions would be applicable. In view of the above, the EPA considers that the proponent should be required to undertake on-going monitoring, sampling and corrective action as necessary to ensure that dust does not:

- affect the health / productivity of vegetation, turtles, and the marine environment; and
- detract from the visual amenity of beaches and dunes through staining.

In order to address the above concerns, the EPA recommends that a condition (i.e. Condition 7 in Appendix 2) be imposed on the proponent requiring it to prepare and implement a dust management plan which:

- incorporates baseline dust monitoring;
- details management measures to control dust during construction;
- incorporates on-going dust monitoring / sampling during operation to:
    - ensure that dust does not affect the health / productivity of vegetation, turtles, and the marine environment;
    - ensure that dust does not detract from the visual amenity of beaches and dunes through staining;
    - enable real time detection of dust events emanating from the proponent's operations from any wind direction;
    - enable the size and composition of particulates to be determined; and
    - enable the proportion of dust attributable to the proponent's operations to be readily determined;
- includes management measures to prevent further dust emissions from the proponent's operations should dust monitoring / sampling indicate that they are the source of dust adversely affecting the environment;
- demonstrates best practice and details the methods to be used for all point and fugitive dust sources;
- provides for continuous improvements in dust management; and
- details complaint response procedures.

Summary

Having particular regard to the:

- commitment made by the proponent; and
- recommended condition requiring the development and implementation of a dust management plan;

it is the EPA's opinion that the proposal can be managed to meet the EPA's environmental objective for this factor.

4.2 Turtles

Description

Only limited data are available in regard to turtle nesting activity in the Cape Preston area. A report prepared by the North West Region Office of the then Department of Conservation and Land Management (CALM) [Kendrick, 2000] on turtles at Cape Preston, indicates that "low densities of nesting activity were encountered (22 tracks and 12 older nests, over 7.5km of suitable beach)". It also indicates that "the beaches of Cape Preston may represent a significant sea turtle nesting resource" given that green turtle activity was low throughout Australia that season. Regional estimates indicate that there may be 100 - 500 nesting female Flatback Turtles in the Cape Preston to Onslow Islands area (Pendoley Environmental Pty Ltd, 2006).

The turtle species that may be found in the Cape Preston area include the Green Turtle, the Flatback Turtle, and either the Loggerhead Turtle or the Hawksbill Turtle (Kendrick, P, 2000). Under the Commonwealth *Environment Protection and Biodiversity Conservation Act, 1999,* the Loggerhead Turtle is listed as endangered, and Green, Flatback, and Hawksbill Turtles are listed as vulnerable. Light overspill from the proponent's operations has the potential to affect nesting turtles and their offspring.

Assessment

The area considered for assessment of this factor is the Cape Preston area.

The EPA's environmental objectives for this factor are to:

- maintain faunal abundance, species diversity and geographical distribution; and
- protect fauna, consistent with the provisions of the *Wildlife Conservation Act, 1950,* the Commonwealth *Environment Protection and Biodiversity Conservation Act, 1999,* and relevant species recovery plans.

The EPA notes that low densities of nesting turtles were encountered but the beaches of Cape Preston may represent a significant sea turtle nesting resource.

While the available data are sparse, on face value they may indicate that turtle nesting in the area is "low", although CALM advice also indicates that the site could be a significant nesting resource. Given the level of information available, the EPA recommends that a precautionary approach be adopted and that a suitably stringent environmental management condition be imposed on the proponent.

Therefore, in order to reduce the potential for impacts on turtles, the EPA recommends that a condition (i.e. Condition 8 in Appendix 2) be imposed on the proponent requiring it to prepare and implement a turtle management plan. The turtle management plan would include:

- turtle monitoring surveys with regular reporting of the results to the Department of Environment and Conservation;

- best practice measures to protect turtle nesting areas from physical disturbance, including:
  - controlling access into turtle nesting areas by people, vehicles, and domestic animals with fences or other means; and
  - the appropriate construction and placement of any structures on or across beaches in order to avoid beach erosion;
- best practice measures to mitigate the effects of light overspill on turtle nesting areas, including:
  - the appropriate selection, placement, and shielding of lighting, the use of timer switches, and other suitable measures consistent with the information presented in the Florida Marine Research Institute report titled, "Understanding, Assessing, and Resolving Light-Pollution Problems on Sea Turtle Nesting Beaches" [Witherington, B. E., and R. E. Martin (1996)]; and
  - regular independent lighting audits and remedial measures.

The EPA considers that a review under Section 46 of the *Environmental Protection Act, 1986* may be required in the event that the results of the turtle monitoring surveys indicate that adverse impacts on turtles are occurring.

Summary

Having particular regard to the recommended condition requiring the development and implementation of a turtle management plan; it is the EPA's opinion that the proposal can be managed to meet the EPA's environmental objective for this factor.

4.3 Vegetation

Description

The additional stockyard capacity required by Korean Steel will be obtained through extensions to the west, east, and south of Mineralogy's stockyard as illustrated in Figure 2. The extensions will result in the clearing of an additional 20ha of vegetation. Vegetation surrounding the proponent's operations may also be impacted by vehicle movements on access and haul roads, dust emissions, the introduction of weeds, fires, and the movement of people.

Assessment

The area considered for assessment of this factor is the expanded Cape Preston stockyard and surrounding areas, including associated materials stockpiling and handling facilities.

The EPA's environmental objective for this factor is to maintain the abundance, species diversity, geographic distribution and productivity of vegetation communities.

The EPA notes that, in addition to the 20ha of vegetation that will be cleared for construction, vegetation surrounding the proponent's operations may also be impacted

by vehicle movements on access and haul roads, dust emissions, the introduction of weeds, fires, and the movement of people.

In order to reduce the potential for impacts on vegetation surrounding the stockyard and associated materials stockpiling and handling facilities, the EPA recommends that a condition (i.e. Condition 9 in Appendix 2) be imposed on the proponent requiring it to prepare and implement a terrestrial vegetation management plan. The terrestrial vegetation management plan would include:

- baseline vegetation monitoring surveys to determine the original condition of vegetation, background dust deposition levels, and the presence of weeds;
- on-going vegetation monitoring surveys to determine the condition of vegetation, impacts on vegetation from dust emissions from the proponent's operations, and the presence of weeds;
- strategies to mitigate impacts on vegetation from dust and/or weeds identified by the monitoring surveys;
- strategies to mitigate impacts on vegetation from vehicle traffic and fires; and
- the installation of suitable fencing around sensitive vegetation.

Summary

Having particular regard to the recommended condition requiring the development and implementation of a terrestrial vegetation management plan; it is the EPA's opinion that the proposal can be managed to meet the EPA's environmental objective for this factor.

4.4 Marine environment

Description

Operation of the proposed materials stockpiling and handling facilities has the potential to impact on the marine environment and sandy beaches in the Cape Preston area. Marine water quality may be affected by materials spills during ship-loading, surface water run-off from the stockyard and port areas, and the discharge of contaminated ballast water from ships. Shipping activities may lead to the introduction of exotic marine organisms from the hulls of ships. Nearby sandy beaches may be affected by emissions, spills, and dust.

Assessment

The area considered for assessment of this factor is the marine environment and sandy beaches in the Cape Preston area.

The EPA's environmental objectives for this factor are to:

- maintain the abundance, species diversity, and geographic distribution of marine flora and fauna;
- maintain marine water quality to ensure ecosystem maintenance consistent with the requirements of the Pilbara Coastal Water Quality Consultations Outcomes:

Environmental Values and Environmental Quality Objectives document (DOE, 2006); and

- maintain the integrity, function and environmental values of the foreshore area.

In order to reduce the potential for impacts on the marine environment and sandy beaches, the EPA recommends that a condition (i.e. Condition 10 in Appendix 2) be imposed on the proponent requiring it to prepare and implement a marine environment management plan to address emissions from the port berthing facility, materials handling facilities, and associated structures. The marine environment management plan would:

- establish Environmental Quality Objectives (EQOs) which explicitly identify uses and values and where they will be protected, and the appropriate environmental criteria required to sustain each EQO;
- ensure that surface water run-off and spills are contained;
- incorporate an oil spill contingency plan;
- incorporate a ballast water management plan;
- include a hull-fouling organisms management plan; and
- include coastal surveys to monitor the effects of materials stockpiling and handling activities on sandy beaches and other coastal and marine ecosystems, as well as strategies to restore environmental quality to acceptable levels if the surveys demonstrate that significant impacts have occurred to beaches or other sensitive coastal and marine ecosystems.

Summary

Having particular regard to the recommended condition requiring the development and implementation of a marine environment management plan; it is the EPA's opinion that the proposal can be managed to meet the EPA's environmental objective for this factor.

4.5 Heritage issues

Description

Construction of the proposed materials stockpiling and handling facilities has the potential to impact on Aboriginal heritage sites. Archaeological and ethnographic surveys of the Cape Preston area and surrounding regions have been previously undertaken for Mineralogy's approved Iron Ore Mine, Downstream Processing (Direct-reduced and Hot-briquetted Iron) and Port project at Cape Preston. The outcomes of these surveys are discussed in Section 3.11 in EPA Bulletin 1056 (EPA, 2002).

Assessment

The area considered for assessment of this factor is the Cape Preston area.

The EPA's environmental objectives for this factor are to ensure that:

- the proposal complies with the requirements of the *Aboriginal Heritage Act, 1972*; and
- changes to the biological and physical environment resulting from the project do not adversely affect cultural associations with the area.

The EPA notes that the Department of Indigenous Affairs has recommended that the statement of approval for this proposal should include a specific condition requiring full ethnographic and archaeological studies of the areas to be impacted by the proposed development to be undertaken prior to the commencement of construction.

The EPA also notes that archaeological and ethnographic surveys of the Cape Preston area and surrounding regions have been previously undertaken for Mineralogy's approved Iron Ore Mine, Downstream Processing (Direct-reduced and Hot-briquetted Iron) and Port project at Cape Preston.

In view of the above, the EPA recommends that a condition (i.e. Condition 11 in Appendix 2) be imposed on the proponent requiring it to prepare and implement an Aboriginal heritage management plan. The plan would include:

- ethnographic and archaeological surveys which are to be undertaken prior to construction in areas that have not already been surveyed within the project area, that are likely to be disturbed or otherwise affected by materials stockpiling and handling operations, and associated infrastructure;
- consultation with traditional owners in regard to ethnographic and archaeological surveys in areas that have not already been surveyed;
- further consultation with representatives of claimant groups;
- the delineation of Aboriginal heritage sites with respect to project components, together with adjustments where necessary to the location of those components; and
- the adoption of relevant recommendations pertaining to the Cape Preston area that were made in the ethnographic survey (O'Connor, 2001) that was undertaken for the previously approved Mineralogy Project.

Summary

Having particular regard to the recommended condition requiring the development and implementation of an Aboriginal heritage management plan; it is the EPA's opinion that the proposal can be managed to meet the EPA's environmental objective for this factor.

4.6 Stockyard drainage

Description

Surface water run-off from the proposed Cape Preston stockyard area has the potential to become contaminated with leachate and sediment from the stockpiles and from spills of fuel, oil, and other miscellaneous materials. Contaminated surface water run-off could impact on nearby dunes and sandy beaches, and marine water quality.

The proponent intends to contain surface water run-off from the stockyard area by grading the base of the stockyard area into the underlying basalt bedrock to form a seal against stockpile leachates. Excess surface water run-off would be used for dust suppression purposes if it is of suitable quality, or disposed of via evaporation if not suitable. Sediments that accumulate within the stockyard area will be removed from the stockyard drainage system on a periodic basis and will be disposed of into the tailings storage facility.

Assessment

The area considered for assessment of this factor is the Cape Preston stock yard area and the nearby dunes, sandy beaches, and marine environment.

The EPA's environmental objective for this factor is to maintain or improve the quality of surface water to ensure that existing and potential uses, including ecosystem maintenance are protected.

The EPA notes that the proponent has made a commitment to prepare a Drainage Management Plan. The Drainage Management Plan will contain plans, guidelines and procedures to minimise and manage any environmental impacts caused by drainage from the stockpiles.

The EPA notes the measures that will be used by the proponent to manage surface water run-off from the stockyard area. However, specific information has not been provided in regard to the configuration of the stockyard area drainage system, the technology that will be used to dispose of excess surface water run-off from the stockyard area via evaporation, and the procedures that will be used to verify the integrity of the seal formed by grading the base of the stockyard area into the basalt bedrock.

In view of the above, the EPA recommends that a condition (i.e. Condition 12 in Appendix 2) be imposed on the proponent requiring it to prepare and implement a stockyard drainage management plan. The plan would include:

- specific details on the configuration of the stockyard drainage system;
- specific details on the technology that would be employed to dispose of excess surface water run-off from the stockyard area via evaporation; and
- procedures to verify the integrity of the seal formed by grading the base of the stockyard area into the basalt bedrock.

Summary

Having particular regard to the:

- commitment made by the proponent; and
- recommended condition requiring the development and implementation of a stockyard drainage management plan;

it is the EPA's opinion that the proposal can be managed to meet the EPA's environmental objective for this factor.

5. Conditions and Commitments

Section 44 of the *Environmental Protection Act, 1986* requires the EPA to report to the Minister for the Environment on the environmental factors relevant to the proposal and on the conditions and procedures, if any, to which the proposal should be subject, if implemented. In addition, the EPA may make recommendations as it sees fit.

In developing recommended conditions for this project, the EPA's preferred course of action is to have the proponent provide an array of commitments to ameliorate the impacts of the proposal on the environment. The commitments are considered by the EPA as part of its assessment of the proposal and, following discussion with the proponent, the EPA may seek additional commitments.

The EPA recognises that not all of the commitments are written in a form which makes them readily enforceable, but they do provide a clear statement of the action to be taken as part of the proponent's responsibility for, and commitment to, continuous improvement in environmental performance. The commitments, modified if necessary to ensure enforceability, then form part of the conditions to which the proposal should be subject, if it is to be implemented.

5.1 Proponent's commitments

The proponent's commitments as set out in the referral document and subsequently modified, as shown in Appendix 2, should be made enforceable.

6. Conclusions

The EPA has considered the proposal by Korean Steel to establish materials stockpiling and handling facilities with a capacity of approximately 4 million tonnes at Cape Preston, approximately 60km west-south-west of Dampier.

The EPA has determined that the relevant environmental factors for the proposal are dust, marine environment, vegetation, turtles, heritage issues, and stockyard drainage. The EPA has recommended that conditions be imposed on the proponent to develop and implement the following management and monitoring plans as a means of minimising potential environmental impacts from the proposal:

- dust management plan;
- turtle management plan;
- terrestrial vegetation management plan;
- marine environment management plan;
- Aboriginal heritage management plan; and
- stockyard drainage management plan.

The EPA originally set the level of assessment for this proposal at PER. Following an appeal by the proponent on this level of assessment, the Minister for the Environment

remitted the proposal to the EPA for a fresh decision on the level of assessment, on the understanding that Korean Steel would provide the EPA with the additional information in a new referral document.

The EPA considers that, based on the information provided in the referral document, the proposal, as described, can be managed in an acceptable manner, subject to the proponent's commitments and the EPA's recommended conditions set out in Section 5 being made legally binding.

7. Recommendations

The EPA submits the following recommendations to the Minister for the Environment:

1. That the Minister notes that the proposal being assessed is for the establishment of materials stockpiling and handling facilities with a capacity of approximately 4 million tonnes at Cape Preston, approximately 60km west-south-west of Dampier;
2. That the Minister considers the report on the relevant environmental factors as set out in Section 4;
3. That the Minister notes that the EPA has concluded that it is unlikely that the EPA's objectives would be compromised, provided there is satisfactory implementation by the proponent of the recommended conditions set out in Appendix 2, including the proponent's commitments; and
4. That the Minister imposes the conditions and procedures recommended in Appendix 2 of this report.

Appendix 1

References

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Appendix 2

Recommended Environmental Conditions and Proponent's Consolidated Commitments

Statement No.

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

MATERIALS STOCKPILING AND HANDLING FACILITIES, CAPE PRESTON

Proposal: To establish materials stockpiling and handling facilities with a capacity of approximately 4 million tonnes at Cape Preston, approximately 60km west-south-west of Dampier.

Proponent: Korean Steel Pty Ltd

Proponent Address: PO Box 7334
PERTH WA 6850

Assessment Number: 1652

Report of the Environmental Protection Authority: Bulletin 1229

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 Description

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 Environmental Management Commitments

2-1 The proponent shall fulfil the environmental management commitments contained in schedule 2 of this statement.

3 Proponent Nomination and Contact Details

3-1 The proponent for the time being nominated by the Minister for the Environment under section 38(6) or (7) of the Environmental Protection Act 1986 is responsible for the implementation of the proposal until such time as the Minister for the Environment has exercised the Minister's power under section 38(7) of the Act to revoke the nomination of that proponent and nominate another person as the proponent for the proposal.

3-2 If the proponent wishes to relinquish the nomination, the proponent shall apply for the transfer of proponent under section 38(6a) and provide the name and address of the person who will assume responsibility for the proposal, together with a letter from that person which states that the proposal will be carried out in accordance with the conditions and procedures of this statement, and

documentation on the capability of that person to implement the proposal and fulfil the conditions and procedures.

3-3 The nominated proponent shall notify the Department of Environment and Conservation of any change of the name and address of the proponent within 30 days of such change.

4 Time Limit of Approval to Commence

4-1 The proponent shall provide evidence to the Department of Environment and Conservation that the proposal has been substantially commenced within five years from the date of this statement or the approval granted in this statement shall lapse and be void.

4-2 The proponent shall make an application for any extension of approval for the substantial commencement of the proposal to the Minister for the Environment prior to five years from the date of this statement, which shall demonstrate that:

1. the environmental factors of the proposal reported in Bulletin 1229 have not changed significantly;

2. new, significant, environmental factors have not arisen; and

3. all relevant decision-making authorities and stakeholders have been consulted.

5 Compliance Reporting

5-1 The proponent shall submit compliance reports in accordance with an audit program developed in consultation with the Department of Environment and Conservation and with compliance monitoring guidelines, and shall:

1. describe, or update, the state of implementation of the proposal;

2. provide verifiable evidence of compliance with the conditions, procedures and commitments;

3. review the effectiveness of corrective and preventative actions contained in the environmental management plans and programs;

4. provide verifiable evidence of the fulfilment of requirements specified in the environmental management plans and programs;

5. identify all confirmed non-conformities and non-compliances and describe the related corrective and preventative actions taken; and

6. identify potential non-conformities and non-compliances and provide evidence of how these are being considered for corrective action.

6 Performance Review

6-1 The proponent shall submit a Performance Review report every five years after the start of production to the Environmental Protection Authority, which addresses:

1. the major environmental issues associated with implementing the project; the environmental objectives for those issues; the methodologies used to achieve these; and the key indicators of environmental performance measured against those objectives;

2. the level of progress in the achievement of sound environmental performance, including industry benchmarking, and the use of best available technology where practicable;

3. significant improvements gained in environmental management, including the use of external peer reviews;

4. stakeholder and community consultation about environmental performance and the outcomes of that consultation, including a report of any on-going concerns being expressed; and

5. the proposed environmental objectives over the next five years, including improvements in technology and management processes.

7 Dust Management Plan

7-1 Prior to ground disturbing activity for the materials stockpiling and handling facilities, the proponent shall prepare a Dust Management Plan to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

This plan shall:

1. include baseline dust monitoring;

2. detail management measures to control dust during construction;

3. incorporate on-going dust monitoring / sampling during operation to:

   - ensure that dust does not affect the health / productivity of vegetation, turtles, and the marine environment;

   - ensure that dust does not detract from the visual amenity of beaches and dunes through staining;

   - enable real time detection of dust events emanating from the proponent’s operations from any wind direction;

- enable the size and composition of particulates to be determined; and

- enable the proportion of dust attributable to the proponent's operations to be readily determined;

  Note: In determining the proportion of dust attributable to the proponent's operations, it will be necessary for the proponent to be able to identify from dust samples, characteristics which distinguish between dust generated by this proposal and dust which may be generated from other sources.

4. include management measures to prevent further dust emissions from the proponent's operations should dust monitoring / sampling indicate that they are the source of dust adversely affecting the environment;

5. demonstrate best practice and details the methods to be used for all point and fugitive sources;

6. provide for continuous improvements in dust management; and

7. detail complaint response procedures.

7-2 The proponent shall implement the Dust Management Plan required by condition 7-1.

7-3 The proponent shall make the Dust Management Plan required by condition 7-1 publicly available, in a manner approved by the Department of Environment and Conservation.

8 Turtle Management Plan

8-1 Prior to ground disturbing activity for the materials stockpiling and handling facilities and in consultation with the Department of Environment and Conservation, the proponent shall prepare a Turtle Management Plan to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

This Plan shall include:

1. turtle monitoring surveys with regular reporting of the results to the Department of Environment and Conservation;

2. best practice measures to protect turtle nesting areas from physical disturbance, including:

   - controlling access into turtle nesting areas by people, vehicles, and domestic animals with fences or other means; and

- the appropriate construction and placement of any structures on or across beaches in order to avoid beach erosion;

3. best practice measures to mitigate the effects of light overspill on turtle nesting areas, including:

   - the appropriate selection, placement, and shielding of lighting, the use of timer switches, and other suitable measures consistent with the information presented in the Florida Marine Research Institute report titled, "Understanding, Assessing, and Resolving Light-Pollution Problems on Sea Turtle Nesting Beaches" [Witherington, B. E., and R. E. Martin (1996)]; and

   - regular independent lighting audits and remedial measures;

Note: In the event that the results of the turtle monitoring surveys indicate that adverse impacts on turtles are occurring, a review under Section 46 of the *Environmental Protection Act, 1986* may be required by the Environmental Protection Authority.

8-2 The proponent shall implement the Turtle Management Plan required by condition 8-1, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

8-3 The proponent shall make the Turtle Management Plan required by condition 8-1 publicly available, in a manner approved by the Department of Environment and Conservation.

9 Terrestrial Vegetation Management Plan

9-1 Prior to ground disturbing activity for the materials stockpiling and handling facilities, the proponent shall prepare a Terrestrial Vegetation Management Plan to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

This Plan shall include:

1. baseline vegetation monitoring surveys to determine the original condition of vegetation, background dust deposition levels, and the presence of weeds;

2. on-going vegetation monitoring surveys to determine the condition of vegetation, impacts on vegetation from dust emissions from the proponent's operations, and the presence of weeds;

3. strategies to mitigate impacts on vegetation from dust and/or weeds identified by the monitoring surveys;

4. strategies to mitigate impacts on vegetation from vehicle traffic and fires; and

5. the installation of suitable fencing around sensitive vegetation.

9-2 The proponent shall implement the Terrestrial Vegetation Management Plan required by condition 9-1.

9-3 The proponent shall make the Terrestrial Vegetation Management Plan required by condition 9-1 publicly available, in a manner approved by the Department of Environment and Conservation.

10 Marine Environment Management Plan

10-1 Prior to ground disturbing activity for the materials stockpiling and handling facilities, the proponent shall prepare a Marine Environment Management Plan to address emissions from the port berthing facility, materials stockpiling and handling facilities, and associated structures to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

This Plan shall be submitted to the Department of Environment and Conservation and the Department of Fisheries.

The objectives of this Plan are to:

- maintain an adequate level of water quality in waters surrounding the port and stockyard area;
- minimise run-off and spills; and
- avoid ballast water contamination and the introduction of exotic marine organisms from the hulls of ships.

This Plan shall:

1. establish Environmental Quality Objectives (EQOs) which explicitly identify uses and values and where they are to be protected, and the appropriate Environmental Criteria required to sustain each Environmental Quality Objective.

   The Environmental Quality Objectives shall include the:

   - Ecosystem Health Objective;
   - Fishing and Aquaculture Objective; and
   - Recreational and Aesthetics Objectives;

   as defined in the Department of Environment document *Pilbara Coastal Water Quality Consultation Outcomes: Environmental Values and Environmental Quality Objectives*. The spatial application of these EQOs shall be as delineated in Map 3 in this document;

2. ensure that run-off and spills are contained;

3. incorporate an oil spill contingency plan;

4. incorporate a ballast water management plan;

5. include a hull-fouling organisms management plan, which includes a risk assessment and a baseline marine survey for benthic and planktonic organisms in the area designated for ship berthing to minimise the risk of introduction of exotic marine organisms from the hulls of ships; and

6. include coastal surveys to monitor the effects of materials stockpiling and handling activities on sandy beaches and other coastal and marine ecosystems, as well as strategies to restore environmental quality to acceptable levels if the surveys demonstrate that significant impacts have occurred to beaches or other sensitive coastal and marine ecosystems.

10-2 The proponent shall implement the Marine Environment Management Plan required by condition 10-1.

10-3 The proponent shall make the Marine Environment Management Plan required by condition 10-1 publicly available, in a manner approved by the Department of Environment and Conservation.

11 Aboriginal Heritage Management Plan

11-1 Prior to ground disturbing activity for the materials stockpiling and handling facilities, the proponent shall prepare an Aboriginal Heritage Management Plan in liaison with the Department of Indigenous Affairs, and submit it to the Department of Environment and Conservation.

This Plan shall include:

1. ethnographic and archaeological surveys which are to be undertaken prior to construction in areas that have not already been surveyed within the project area, that are likely to be disturbed or otherwise affected by materials stockpiling and handling operations, and associated infrastructure;

2. consultation with traditional owners in regard to ethnographic and archaeological surveys in areas that have not already been surveyed;

3. further consultation with representatives of claimant groups;

4. the delineation of Aboriginal heritage sites with respect to project components, together with adjustments where necessary to the location of those components; and

5. the adoption of relevant recommendations pertaining to the Cape Preston area that were made in the ethnographic survey (O'Connor, 2001) that was undertaken for the previously approved Mineralogy Pty Ltd Project.

11-2 The proponent shall implement the Aboriginal Heritage Management Plan required by condition 11-1.

11-3 The proponent shall make the Aboriginal Heritage Management Plan required by condition 11-1 publicly available, in a manner approved by the Department of Environment and Conservation.

12 Stockyard Drainage Management Plan

12-1 Prior to ground disturbing activity for the materials stockpiling and handling facilities, the proponent shall prepare a Stockyard Drainage Management Plan to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

This Plan shall include:

1. specific details on the configuration of the stockyard drainage system;

2. specific details on the technology that will be employed to dispose of excess surface water run-off from the stockyard area via evaporation or other means; and

3. procedures to verify and ensure the integrity of the seal formed by grading the base of the stockyard area into the basalt bedrock.

12-2 The proponent shall implement the Stockyard Drainage Management Plan required by condition 12-1.

12-3 The proponent shall make the Stockyard Drainage Management Plan required by condition 12-1 publicly available, in a manner approved by the Department of Environment and Conservation.

13 Decommissioning Plans

13-1 Prior to ground disturbing activities, the proponent shall prepare a Preliminary Decommissioning Plan, which provides the framework to ensure that the site is left in an environmentally acceptable condition.

The Preliminary Decommissioning Plan shall address:

1. the rationale for the siting and design of plant and infrastructure as relevant to environmental protection, and conceptual plans for the removal or, if appropriate, retention of plant and infrastructure;

2. the long-term management of ground and surface water systems affected by the materials stockpiling and handling facilities, and associated infrastructure;

3. a conceptual rehabilitation plan for all disturbed areas and a description of a process to agree on the end land use(s) with all stakeholders;

4. a conceptual plan for a care and maintenance phase; and

5. management of potentially polluting materials to avoid the creation of contaminated areas.

13-2 At least 12 months prior to the anticipated date of decommissioning, or at a time agreed with the Environmental Protection Authority, the proponent shall prepare a Final Decommissioning Plan designed to ensure that the site is left in an environmentally acceptable condition to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

The Final Decommissioning Plan shall address:

1. the removal or, if appropriate, retention of plant and infrastructure in consultation with relevant stakeholders;

2. the long-term management of ground and surface water systems affected by the materials stockpiling and handling facilities, and associated infrastructure;

3. rehabilitation of all disturbed areas to a standard suitable for the agreed new land use(s); and

4. identification of contaminated areas, including provision of evidence of notification and proposed management measures to relevant statutory authorities.

13-3 The proponent shall implement the Final Decommissioning Plan required by condition 13-2 until such time as the Minister for the Environment determines, on advice of the Environmental Protection Authority, that the proponent’s decommissioning responsibilities have been fulfilled.

13-4 The proponent shall make the Final Decommissioning Plan required by condition 13-2 publicly available, in a manner approved by the Department of Environment and Conservation.

Notes

1. Where a condition states "on advice of the Environmental Protection Authority", the Environmental Protection Authority will provide that advice to the Department of Environment and Conservation for the preparation of written notice to the proponent.

2. The Environmental Protection Authority may seek advice from other agencies or organisations, as required, in order to provide its advice to the Department of Environment and Conservation.

3. The Minister for the Environment will determine any dispute between the proponent and the Environmental Protection Authority or the Department of Environment and Conservation over the fulfilment of the requirements of the conditions.

4. The proponent is required to apply for a Works Approval and Licence for this project under the provisions of Part V of the *Environmental Protection Act, 1986*.

Schedule 1

The Proposal (Assessment No. 1652)

The proposal is to establish materials stockpiling and handling facilities with a capacity of approximately 4 million tonnes at Cape Preston, approximately 60km west-south-west of Dampier.

The proposal involves the:

- management, movement, and handling of materials and goods;
- movement of iron ore products to the port at Cape Preston; and
- export of iron ore product through the port.

Infrastructure required for the proposal such as power, water supply, conveyors, and other facilities required for the movement of materials and product do not form part of this proposal.

The additional stockyard capacity will be obtained through extensions to the west, east, and south of Mineralogy's stockyard as illustrated in Figure 1. The stockpiles will be about 45m wide in 5m deep canyons. A site plan of the Cape Preston stockyard area is provided in Figure 2.

Materials and product will be delivered to the stockpile area by overland conveyor systems, roads, and/or railways. This proposal does not include any overland conveyor system, roads, and/or railways. Additional conveyors will be required within the stockpile area to service the additional stacker and reclaimer. The ship-loader and out-loading materials handling conveyors will have a nominal capacity of up to 10,000 tonnes per hour.

A detailed description of the proposal and its associated environmental impacts can be found in the proponent's referral document (Mineralogy Pty Ltd, 2006). A summarised description of the proposal is provided in Table 1 below.

Table 1: Summarised description of the proposal

Element	Description
Stockpile area.	Not more than 20 hectares.
Materials that will be handled.	Hot briquetted iron (HBI). Iron ore pellets. Magnetite concentrate. Blended iron ore products. Iron ore - Pisolitic, lump, blended ore, and fines. Miscellaneous - mainly construction materials and small quantities of oil and grease.

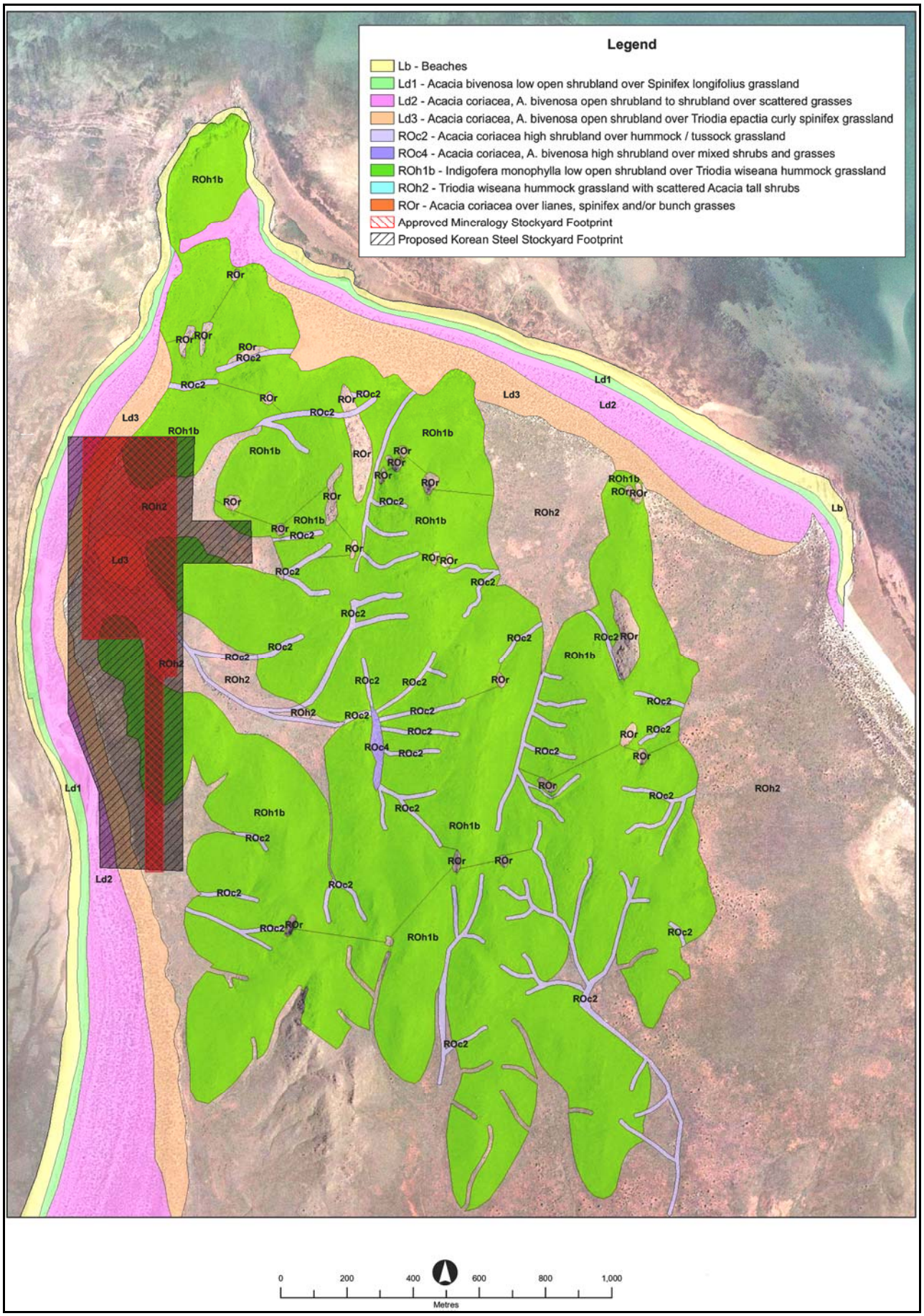

Figure 1: Location plan with proposed Korean Steel stockyard footprint and approved Mineralogy stockyard footprint [Source: Figure 2 from Mineralogy Pty Ltd, 2006 (modified)]

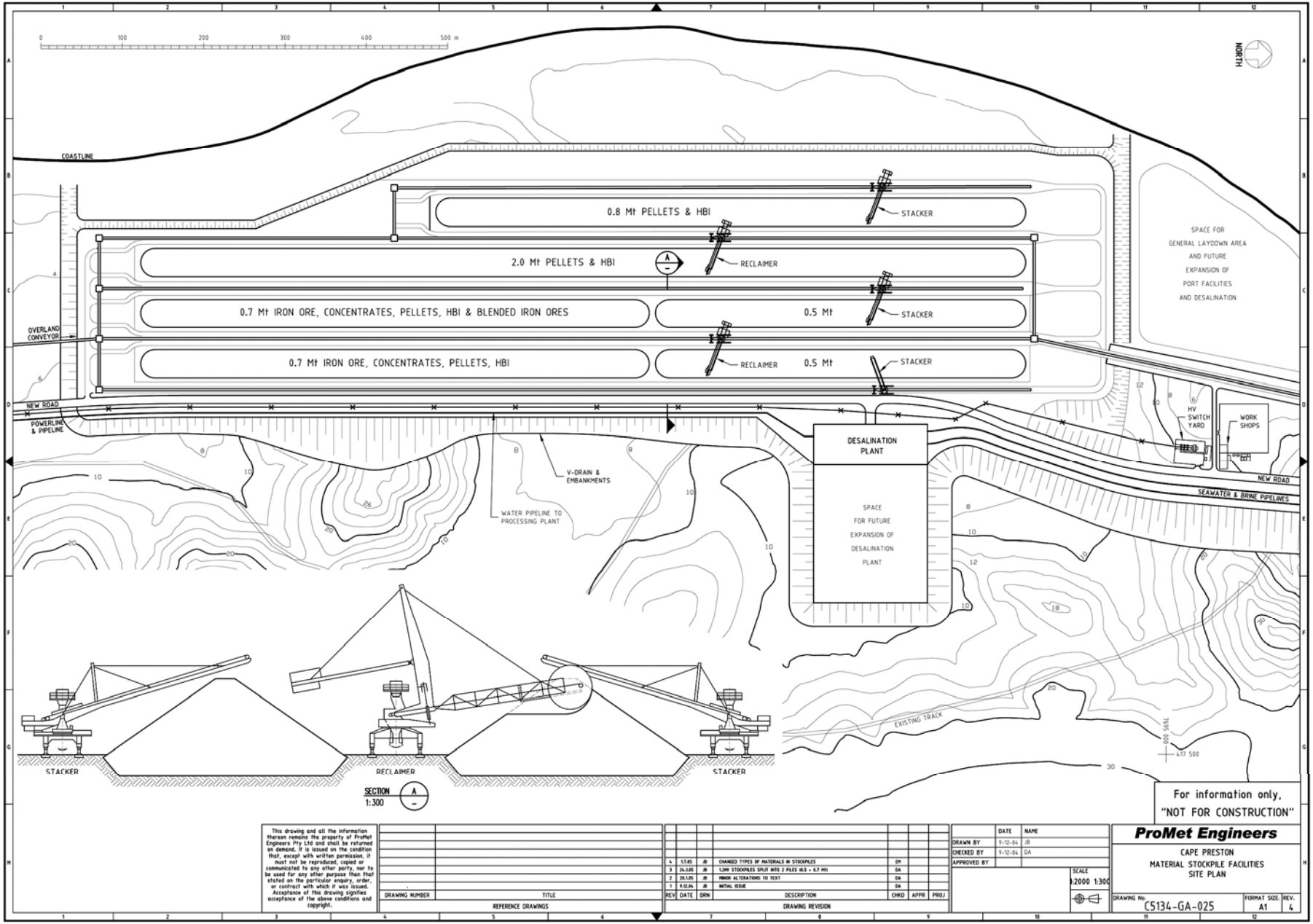

Figure 2: Cape Preston stockyard area site plan (Source: Figure 3 from Mineralogy Pty Ltd, 2006)

Schedule 2

Proponent's Environmental Management Commitments

May 2006

MATERIALS STOCKPILING AND HANDLING FACILITIES, CAPE LAMBERT

(Assessment No. 1652)

Korean Steel Pty Ltd

Proponent's Environmental Management Commitments - May 2006

MATERIALS STOCKPILING AND HANDLING FACILITIES, CAPE PRESTON (Assessment No. 1652)

Note: The term "commitment" as used in this schedule includes the entire row of the table and its six separate parts as follows:

- a commitment number;
- a commitment topic;
- the objective of the commitment;
- the 'action' to be undertaken by the proponent;
- the timing requirements of the commitment; and
- the body/agency to provide technical advice to the Department of Environment.

Consolidated Management Commitments

Commitment Number	Topic	Objective	Action	Timing	Advice From
1	Environmental Management System	To manage the relevant environmental factors.	Prepare and implement an Environmental Management System (EMS) for the project, to include: 1. an environmental policy and corporate commitment to the EMS; 2. planning to meet environmental requirements; 3. specification and implementation of actions to meet environmental requirements; 4. measurements and evaluation of environmental performance; and 5. review and improvement of environmental outcomes. The Management Plans identified below will form part of the EMS.	A Construction Phase EMS will be completed prior to construction. An Operational Phase EMS will be substantially completed prior to operations.	Accredited assurance service.

Commitment Number	Topic	Objective	Action	Timing	Advice From
2	Environmental Management Program	To manage the potential impacts of the construction and operational phases of the project.	Prepare, implement and regularly revise an Environmental Management Programme (EMP). The EMP will contain plans, guidelines and procedures to manage environmental issues associated with construction and operation of the project, including: 1. dust management plan (see commitment 3); 2. drainage management plan (see commitment 4); 3. miscellaneous items laydown area management plan (see commitment 5); and 4. decommissioning and closure plan.		
3	Dust Management Plan	To minimise and manage the potential impacts of dust.	Prepare a Dust Management Plan. The Dust Management Plan will contain plans, guidelines and procedures to minimise and manage any dust generated by the project.	Prior to construction.	
4	Drainage Management Plan	To manage the potential impacts of heap drainage.	Prepare a Drainage Management Plan. The Drainage Management Plan will contain plans, guidelines and procedures to minimise and manage any environmental impacts caused by drainage from the stockpiles.	Prior to construction.	
5	Miscellaneous Items Laydown Area	To manage the potential impacts of the Miscellaneous Items Laydown Area.	Prepare a Miscellaneous Items Laydown Area Management Plan. The Miscellaneous Items Laydown Area Management Plan will contain plans, guidelines and procedures to minimise and manage any environmental impacts caused by the storage of materials in the Miscellaneous Items Laydown Area.	Prior to operations.	
6	Ministerial Statement 000635	To avoid interference with Mineralogy Pty Ltd's commitments in accordance with Ministerial Statement 000635.	Korean Steel commits to ensuring that its activities pursuant to the project do not cause Mineralogy Pty Ltd to breach its commitments under Ministerial Statement 000635.		

Commitment Number	Topic	Objective	Action	Timing	Advice From
7	Best Practice	To ensure high levels of appropriate management throughout all phases of the proposal and appropriate ongoing research.	Implement best practice environmental management and decommissioning and rehabilitation management plans within the project. Details of progress against management objectives will be reported in Annual Environmental Reports.	Develop prior to construction and implement during operations.	