

Part C

8 REFERENCES

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9 APPENDICES

Appendix I: Bioregional Setting

Climate

Christmas Island lies on the southern edge of the inter-tropical convergence zone and the climate is dominated by a low pressure trough that seasonally circles the equator. The Island has a tropical monsoonal climate with distinct wet and dry seasons and little seasonal variation in temperature. The dry season (May to November) is dominated by low and sporadic rainfall (see Figure 10) with consistent south-east trade winds. The wet season generally occurs from December to April with the island receiving most of its 2000 mm of annual rainfall during this period, particularly in February and March. Christmas Island’s annual rainfall is 2081 mm over 33 years but may vary considerably from year to year with only 1028 mm recorded in 1987. Temperatures remain relatively uniform throughout the year, with an average daily maximum of 28°C in March/ April and average daily minimum of 22°C in August/September. The Island has high humidity 80-90% throughout the year and frequent dews and heavy mists may occur during the wet season.

During the wet season, Christmas Island is subject to the influence of north-west monsoons, which typically cause high swells and high winds, with gusts of over 100 km/h. No cyclones have been recorded as passing directly over the island, but many have passed nearby (Figure 11) resulting in strong winds and heavy rainfall on the island.

The Island does have distinct microclimates due to the island’s geography with rainfall measurements indicating that there are significant variations in rainfall (Falkland, 1999). Average rainfall at Rocky Point (Settlement), Jemma Cave and South Point (1931, 2375 & 1907 mm respectively) for example shows the significant variation across the Island. Daily evaporation measurements taken at the Airport indicate that evaporation exceeds rainfall between July and October.

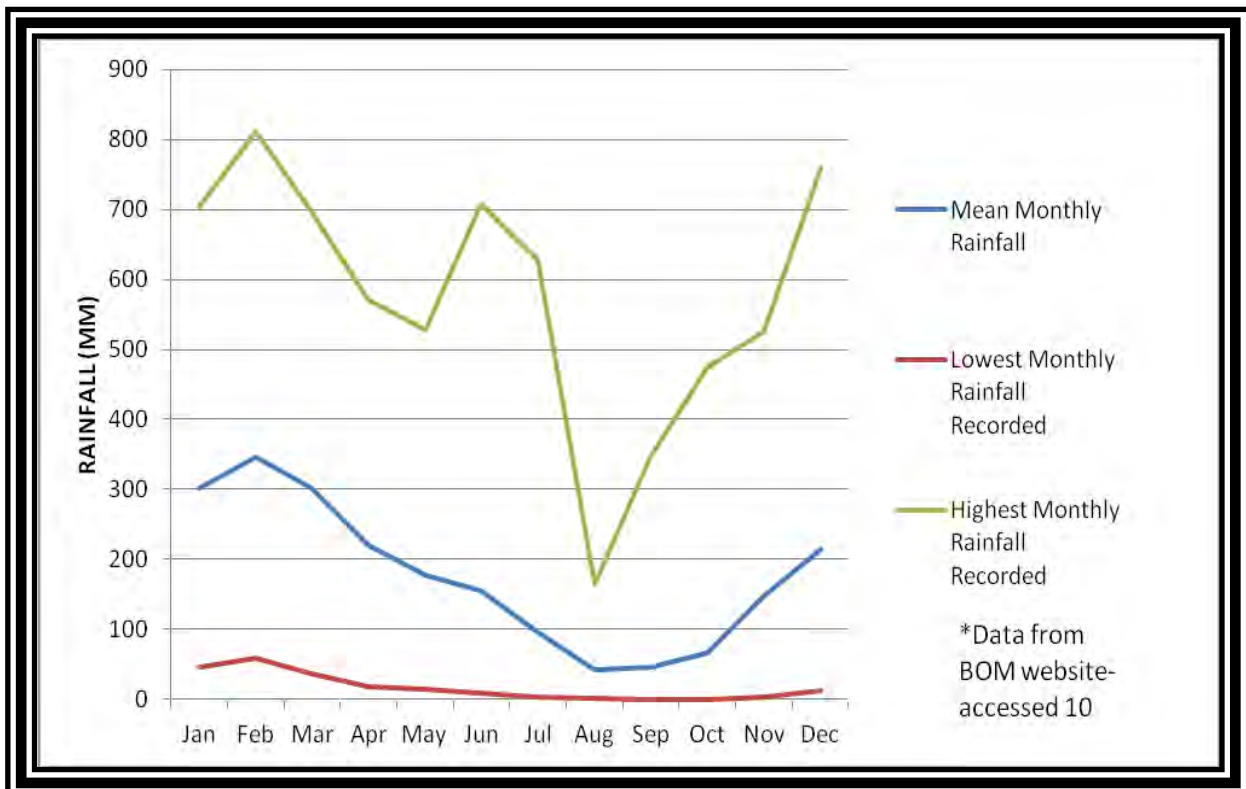


Figure 10: Average monthly rainfall (Airport Station 200790) (Bureau of Meteorology 2012)

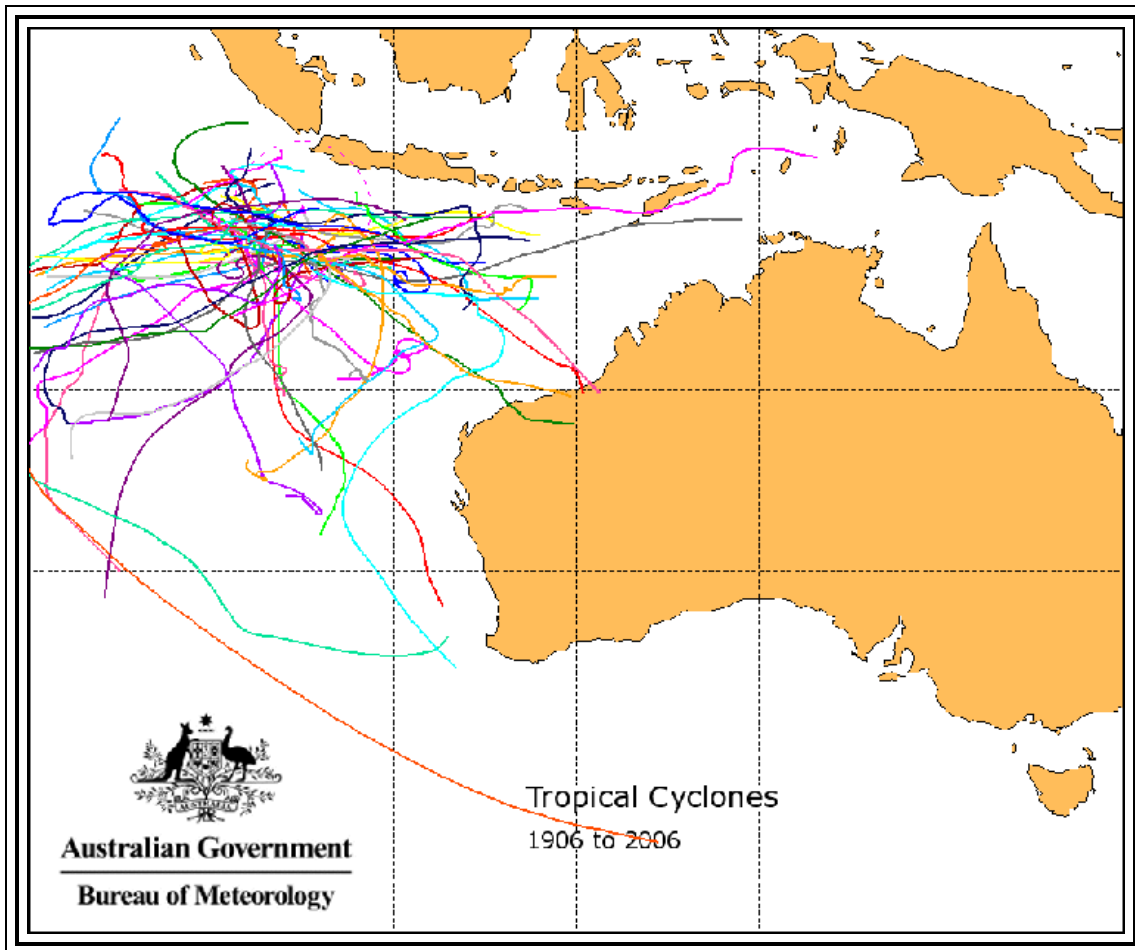


Figure 11: Paths of tropical cyclones passing within 200km of Christmas Island (1906-2006)
(Bureau of Meteorology 2012)

The key implications of the climate for the phosphate operations relate to;

- Shipping: The aspect of the port means that the safest conditions for shiploading are in the dry season (protected waters and offshore SE trades). This also assists with protecting public amenity from dusts emissions blowing offshore. Conversely in the wet season, gale force winds, regional cyclones and heavy seas frequently disrupt shipping activities in Flying Fish Cove for days and even weeks at a time, and onshore winds can cause issues with dust blowing over the settlement area.
- Transportation of product for processing can be difficult in the wet season due to the impacts on road conditions.

Topography & Geology

Christmas Island is one of a series of submarine seamounts that rise above the 5,500 m deep abyssal areas of the West Australian Basin. At the core of the island are volcanic rocks, mainly composed of basalt with a layer of limestone generally covering these volcanic rocks, with occasionally outcrops, particularly along the present coastline. The oldest (Upper Eocene) limestones are found near present sea level and the youngest (Pliocene) near the island summit, 330 m above sea level. The limestone is mixed with dolomite sediments, basalts and tuffs. A layer of phosphate-rich soil material covers the limestone over about half of the island.

The island is characterised by sea cliffs that rise via a series of terraces to a central plateau. The shoreline is dominated by cliffs and extensive shore platforms with a few small beaches and Flying Fish Cove which has a relatively large beach and shallow platform being the only safe harbour for much of the year. The island's natural landscape is dominated by karstic surface landforms and cave systems. A major feature of the Christmas Island geomorphology is the lack of surface drainage. Rainfall mostly infiltrates the land surface and is utilised by plants, contributes to soil water stores or recharges to groundwater. There is therefore no significant surface drainage network except down gradient of springs that arise at the interface between limestone and basalt formations.

Christmas Island's soils are generally highly permeable and there is consequently little runoff or erosion. In the Wet Season when the soils are saturated, runoff can during heavy rainfall providing some risk of erosion and

sedimentation. However, given the high natural infiltration rates the risk of erosion and sedimentation is generally localised to compacted areas such as roads and stockpile pads.

There are three key hydrogeological units on the island; shallow, residual soils, which overlie fractured, unconfined – semi-confined aquifers within the karstic limestone rocks, which in turn overlay relatively impermeable volcanic basement rocks. Groundwater levels on the island are reflected by the location of the unconfined water table within the karst limestone aquifers. Limestone aquifers can be recharge when rainfall permeates through the soil zone into the underlying aquifers or by direct runoff of rainfall into karst features such as dolines and sinkholes that occur across the island. Assessments suggest that approximately half of all incident rainfall passes through the soil zone and recharges the underlying limestone aquifers. Groundwater discharge occurs at surface springs such as Hosnie’s Spring and offshore springs such as those found at Flying Fish Cove.

Flora

The flora of Christmas Island has very strong taxonomic relationships with those of the Indo-Malayan and Malesian regions. Some species (e.g. *Terminalia catappa*, *Inocarpus fagifer* and *Gyrocarpus americanus*) are elements of a more widely distributed, and largely unremarkable, tropical Indo-Pacific littoral flora that extends as far east as the islands of Polynesia. Despite its isolated location, estimated 10-million year history above sea level, and diverse ‘high-island’ landscape, only eighteen species are known to be endemic to Christmas Island.

The flora comprises about 420 species of vascular plants with approximately 242 species indigenous to the island and a further 177 species introduced since human occupation. The general taxonomic status and affinities of the flora are relatively well known but detailed records of population distributions across the island (and its range of habitats) are limited for many species. Some additional species of ferns, herbs and shrubs continue to be added to the flora as a result of further collections, especially from poorly accessible terrace areas on the island.

Two species, the endemic lithophytic fern *Asplenium listeri*, and the ground fern *Tectaria devexa* var. *minor* are listed as threatened species under the *Environmental Protection and Biodiversity Conservation Act 1999*.

Three features of the ecology of the island’s native vegetation are notable;

- the occurrence of many of the widespread Indo-Malesian species in habitats that would be considered extremely atypical elsewhere in their natural ranges, and associated with this, the exceptionally large stature of some of these species;
- the low diversity of canopy and sub-canopy species and the lack of structural complexity (e.g. relatively poor development of robust woody vines and rattans, the absence of aroids and of ginger in the understorey) in the Island’s rainforests; and
- the very low diversity and lack of speciation amongst plant genera that elsewhere in the region is characteristic of early successional, and frequently disturbed, rainforest environments (e.g. *Macaranga*, *Claoxylon* and *Pipturus*).

The geology, geomorphology and climate on Christmas Island create the biophysical environment and constraints for the vegetation communities. These factors determine the soil nutrient status, the seasonal availability of moisture and the degree of exposure to wind, which in turn control the distribution, structure and functioning of the natural vegetation.

There are seven major structural types of secondary vegetation (i.e. vegetation that has established in areas that have been cleared of the original natural forest) on Christmas Island. The occurrence of these secondary vegetation types in specific disturbed areas on Christmas Island reflects the influence of four main factors:

- The areal extent and the severity/intensity of the original disturbance (especially whether the soil profile has been disrupted or removed);
- Proximity to the nearest forest boundaries and/or to weed-infested areas;
- The subsequent disturbance or management history of the area (especially the frequency and intensity of further disturbances including fire); and,
- The time since the last major disturbance occurred.

Whether or not the soil profile has been removed or disturbed, the proximity to forest and/or to weed infested areas and the occurrence of further disturbance are the major environmental determinants of secondary vegetation type and successional pathways. There are four main successional pathways:

- Arrested successions dominated by ferns;
- Stagnant successions dominated by thickets of exotic shrubs and vines;
- Reconstructive successions dominated by *Macaranga tanarius*; and

- Retrogressive successions leading to fernlands.

Perennial (permanent) surface aquatic habitats (freshwater) on Christmas Island are limited to a number of spring-fed streams found along coastal or sloping areas of the island. Hosnie's Spring is listed as a Wetland of International Importance under the Convention on Wetlands of International Importance, Water Fowl Habitat 1971 (known as the 'Ramsar Convention') and in the Directory of Important Wetlands in Australia. With the exception of freshwater mangroves at Hosnie's Spring, there is no freshwater flora described nor observed on Christmas Island. High canopy cover by rainforest species may prevent sufficient light for extensive growth of aquatic plants.

Fauna

Terrestrial Fauna

The inventory of the island's invertebrate fauna is incomplete however 20 terrestrial and intertidal crabs (of which 13 are regarded as true land crabs depending on the ocean only for their larval development), one freshwater prawn, 14 snails, several butterflies, some 70 moths, 90 beetles, 30 spiders, one scorpion, five false scorpions and 1 amphipod have been described. Most of the described terrestrial invertebrates also occur in adjacent tropical areas of south-east Asia. There are many introduced terrestrial invertebrate species, including honeybees, one centipede, one cockroach, two termites, four fruit flies, several spiders, one snail, and the Yellow Crazy Ant (*Anoplolepis gracilipes*), whose supercolonies throughout the island have major adverse implications for the management of the Christmas Island ecosystem.

Native mammal and reptilian fauna has suffered population decline and in some cases extinction since settlement and there have been a number of exotic reptiles and mammals introduced.

Christmas Island has 14 species of resident native birds, and nine regular breeding seabirds with at least 104 vagrant or migrant bird species. Christmas Island is of international conservation significance as a seabird rookery and because many of its bird species are endemic, with seven endemic land bird taxa (three species and four subspecies) and three endemic seabird taxa (two species and one subspecies). The endangered and endemic Abbott's booby now occurs only on Christmas Island, and nests on tall emergent trees of the western and southern plateau rainforest. The other two endemic seabirds are the Christmas Island frigatebird (*Fregata andrewsi*) and the white-tailed tropicbird or golden bosun (*Phaethon lepturus fulvus*). The red-footed booby (*Sula sula*) is the most numerous of the island's seabirds which nests in tree colonies on the shore and inland terrace, and the brown booby (*Sula leucogaster*) nests on the ground at the edge of the seacliff and inland cliffs. Other important seabirds breeding on Christmas Island include the red-tailed tropicbird (*Phaethon rubricauda*), great frigatebird (*Fregata minor*), lesser frigatebird (*Fregata ariel*), and common noddy (*Anous stolidus*).

Land based birds species include the Christmas Island swiftlet (*Collocalia linchi natalis*) which nests in caves or overhangs, the Christmas Island imperial pigeon feeds mainly on fruits from the rainforest and settled areas, the emerald dove, Christmas Island white-eye and thrush, and the Christmas Island hawk-owl and goshawk which feed on small mammals, birds, reptiles and invertebrates. The resident bird fauna include a number introduced species (including the Nankeen kestrel (*Falco cenchroides*) and the white-faced heron (*Egretta novaehollandiae*) self-established from Australia since settlement and utilise open habitats created by vegetation clearing.

There are five native mammal species, including three endemic species, and four introduced mammals on Christmas Island. The two rat species are declared extinct and it is highly likely that the shrew and pipistrelle bat are extinct leaving the flying fox as the only native mammal species on the Island.

There are six native reptile species on Christmas Island of which five are endemic. Another five species are introduced reptiles, and there are two marine turtles that breed on the island. The populations of all native terrestrial reptiles, with the exception of the Giant Gecko, appear to be in decline.

There are a number of significant threats to the integrity and sustainability of ecological processes on Christmas Island. These threats include the Yellow Crazy Ant; the Wolf Snake and other exotic reptiles; cats, rats and mice; introduced birds; weed species; and potential long term climate change.

Marine Fauna

Marine fauna includes 420 specimens of coral and 525 identified fish species including four species listed for the purposes of the EPBC Act. Flying Fish Cove displays the greatest variation in marine habitats and species diversity encountered on Christmas Island.

The Existing Socioeconomic Environment

The community of Christmas Island has a colonial past based on phosphate mining with all of the hardship and inequity that such a history implies. The formation of the Union of Christmas Island Workers in 1974 led to wage justice for the island's workers and, following the closure of the Commonwealth's mining operations in 1987, the ultimate emergence of the current phosphate mining company in which many of the island's residents are now shareholders. The population of the island at the last Census (2006) was 1,403 (Shire of Christmas

Island, 2009). The principal economic activity on the island is phosphate mining which provided 48% of the Islands Gross Product in 2005-6 and employed 181 people (ACIL Tasman, 2009). Other key employers are government administration and small business. Phosphate mining has a wide impact on the economy with the impact of mining stopping on the Island estimated at 280 full time equivalent jobs (ACIL Tasman, 2009). There are a range of current land uses on Christmas Island with the largest land use by area is nature conservation in the form of the Christmas Island National Park, which occupies almost 63% of the island. Other land uses include residential housing, tourism, recreation, transport and the provision of utility services.

Appendix II: Mining Lease 70/1 (Excluding appendices & attachments)

Form 8

Instrument of Lease

Mining Act 1978 (W.A.)(C.I.)

MINING LEASE No.

The COMMONWEALTH OF AUSTRALIA in consideration of the rents hereinafter reserved and of the covenants on the part of the Lessee described in the First Schedule to this lease and of the conditions hereinafter contained and pursuant to the *Mining Act 1978 (W.A.)(C.I.)*-hereby leases to the Lessee the land more particularly delineated and described in the Second Schedule to this lease subject however to the exceptions and reservations if any set out in the Third Schedule to this lease and to any other exceptions and reservations which are by the *Mining Act 1978 (W.A.)(C.I.)* and by any Act or Territory Ordinance for the time being in force deemed to be contained herein to hold to the Lessee in the shares set out in the First Schedule to this lease for a term of 21 years commencing on the date set out in the Fourth Schedule to this lease upon and subject to such of the provisions of the *Mining Act 1978 (W.A.)(C.I.)* as are applicable to mining leases granted thereunder and to the covenants and conditions hereinafter contained or implied herein the Lessee paying therefor the rents and royalties for the time being and from time to time respectively prescribed pursuant to the provisions of the *Mining Act 1978 (W.A.)(C.I.)* at the times and in the manner so prescribed.

AND it is hereby agreed and declared that unless the Lessee shall at all times duly and punctually perform and observe the covenants and conditions hereinafter contained or implied herein this lease shall be liable to forfeiture and may be forfeited by the Minister pursuant to the powers in that behalf conferred by the *Mining Act 1978 (W.A.)(C.I.)* provided that the Minister may as he thinks fit impose on the Lessee a penalty not exceeding 55,000.00 as an alternative to forfeiture of this lease. The covenants and conditions hereinbefore referred to are that the Lessee shall -

1. pay the rents and royalties due under this lease at the prescribed time and in the prescribed manner
2. use the land in respect of which this lease is granted only for mining purposes in accordance with the *Mining Act 1978 (W.A.)(C.I.)*
3. comply with the prescribed expenditure conditions applicable to such land unless partial or total exemption therefrom is granted in such manner as is prescribed
4. not assign, underlet or part with possession of such land or any part thereof without the prior written consent of the Minister, or of an officer of the Department acting with the authority of the Minister lodge with the Department at Perth such periodical reports and returns as may be prescribed
5. promptly report in writing to the Minister details of all minerals of economic significance discovered in, on or under the land the subject of this lease
6. duly and punctually observe and perform all other provisions of the *Mining Act 1978 (W.A.)(C.I.)* and of any other Act or Territory Ordinance for the time being in force applicable or relating to the Lessee or this lease or the land the subject of this lease if any mineral is specified in the Fifth Schedule to this

lease, be authorized by this lease to mine on or under or both and remove from the land the subject of this lease only the mineral so specified

9. duly and punctually perform and observe the further conditions or stipulations if any set out in the Sixth Schedule to this lease as well as any condition which may hereafter be imposed by the Minister pursuant to Section 84 of the *Mining Act 1978 (W.A.)(C.L)*
10. cause all holes, pits, trenches and other disturbances to the surface of the land and subject of this lease made whilst mining and which in the opinion of the State Mining Engineer are likely to endanger the safety of any person or animal to be filled in or otherwise made safe to the satisfaction of the State Mining Engineer.

In this lease:

"Lessee" includes the executors administrators and permitted assigns of the Lessee or if the Lessee be more than one of the respective executors administrators and permitted assigns of each Lessee or in the case of a Lessee which is a corporation the successors and permitted assigns of that Lessee.

If the Lessee be more than one the liability of the Lessee hereunder shall be joint and several.

A reference in this Lease to an Act or Territory Ordinance is a reference to that Act or Ordinance as in force in the Territory from time to time and includes any regulations or by-laws in force in the Territory under that Act or Ordinance.

FIRST SCHEDULE

PHOSPHATE RESOURCES LIMITED (ACN 009 396 543) of Level 11, 105 St George's Terrace, Perth, Western Australia.

SECOND SCHEDULE

(Description of Land:)

Locality: Christmas Island

Mineral Field: Christmas Island Area, etc.: 2,054.2087 hectares

Being the land delineated on Survey Diagram No OP2463 and recorded in the Department of Minerals and Energy, Perth.

THIRD SCHEDULE

All petroleum as defined in the *Petroleum Act 1967 (W.A.)(C.I.)* on or below the surface of the land the subject of this lease is reserved to the Crown with the right of the Crown and any person lawfully claiming thereunder or otherwise authorized to do so to have access to the land the subject of this lease for the purpose of searching for and for the operations of obtaining petroleum (as so defined) in any part of the land.

FOURTH SCHEDULE

Date of Commencement of the lease.

This Lease shall commence on the date of execution of the deed entitled "Explanatory Fuel Arrangements Memorandum Christmas Island" ("EFAC") and the respective various Contracts referred to in EFAC which are to be entered into by -

Commonwealth of Australia ("Commonwealth");

and

Gaseng Petroleum (Christmas Island) Operations Pty Ltd (ACN 058 315 754)
("Gaseng Petroleum")

and

Indian Ocean Oil Company Pty Ltd (ACN 077 514 642) (100")

and

Phosphate Resources Limited (ACN 009 396 543) ("PRL").

FIFTH SCHEDULE

If applicable minerals to be specified. Phosphate, stone, gravel, chalk and sand.

**SIXTH SCHEDULE
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**SIXTH SCHEDULE
FURTHER CONDITIONS**

1. DEFINITIONS

In this Schedule subject to the context -

"Christmas Island" means the Territory of Christmas Island;

"Dust Removal Project" means the document entitled "Christmas Island Phosphates Revised Dust Removal Project June 1997";

"Environment Management Plan" means the Environment Management P12:. attached at Appendix B;

"Environment Officer" means the person for the time being delegated under the *Environmental Protection Act 1986 (W.A.)(C.I.)* as Environmental Officer (Indian Ocean Territories);

"Improvements" means all buildings, structures, fixtures and fittings affixed to the Leased Land;

"Leased Land" means the land referred to in the Second Schedule;

"Mining Schedule" means the Mining Schedule attached at Appendix A;

"Minister" means the Minister for the time being responsible for the Territory of Christmas Island, the Minister acting on behalf of such Minister or any person authorised by the Minister or Acting Minister to act on their behalf;

"month" means calendar month;

"notice" means notice in writing;

"Operations" means every kind of work carried out pursuant to this Lease by the Lessee, its agents, servants invitees and contractors including without limiting the generality of the foregoing -

- (a) the reclaiming, mining, treating, processing, transporting, handling and dispatching from Christmas Island of phosphate rock in whatever form or state won from the Leased Land;
- (b) the use of any plant or processing technique permitted hereunder for the improving, treating, processing, transporting, handling and dispatching of phosphate rock on the Leased Land;
- (c) utilising the port facilities on Christmas Island for the export of phosphate rock and for such other purposes as the Lessee may reasonably require;
- (d) the cutting, and constructing on the Leased Land of all water-races, drains, channels, dams, pathways, roads, conveyors, pipelines, powerlines and other engineering services to be used in connection with the Lessee's operations hereunder;
- (e) the quarrying of stone, gravel and chalk and the taking of sand on the Leased Land;

- (f) the erection on the Leased Land of all buildings (other than dwellings), installations, facilities and machinery to be used in connection with the Lessee's operations hereunder;
- (g) the drilling of bores and wells for water;
- (h) any other activity of the Lessee which is reasonably necessary to enable the Lessee to carry out the activities referred to in sub-paragraphs (a) to (g) above;

"person" or "persons" includes bodies corporate;

"phosphate rock" includes bulk phosphate, phosphate dust, granules and pellets;

"primary habitat" means any vegetation community that consists of vegetation in a climax state which has significant conservation value and where the overall habitat has not been modified by human activity;

"public utility" means electricity, water, sewerage and telecommunications supply installations and any other public utility situated on the Leased Land;

"quarterly weighted average price" means for each shipment of phosphate rock, the price per dry tonne of phosphate rock calculated as follows -

- (a) the dry tonnage of bulk phosphate shipped is calculated by subtracting a tonnage of moisture, based on the actual moisture content specified by the Lessee's customers' contracts for that shipment, from the shipment tonnage;
- (b) the value of the shipment is converted from US dollars to Australian dollars according to the provisions of clause 3.2(b);
- (c) at the end of each quarter, the sum of the dry tonnages calculated pursuant to (a) is determined;
- (d) at the end of each quarter, the sum of the Australian dollar values calculated pursuant to (b) is determined;
- (e) the quarterly weighted average price is determined by dividing the total value of shipments calculated at (d) by the total dry tonnage shipped calculated pursuant to (c);
- (f) the price so determined is then used in the calculation of royalty due.

"Shipped Dry Tonne" means a tonne less an allowance for moisture content which shall correspond to the actual moisture content specified by the Lessee's customers' contracts.

THE LESSEE'S COVENANTS

2. RENT

21 The Lessee shall during the term of this Lease pay to the Commonwealth such rent as may be prescribed by the *Mining Act 1978 (W.A.)(C.I.)*.

3. ROYALTIES

Phosphate

Rock

31 The Lessee shall during the term of this Lease pay to the Commonwealth royalties per shipped dry tonne of phosphate rock at the respective rates and times and in the manner provided in this Lease.

32 The royalties payable by the Lessee on bulk phosphate shall be calculated as follows -

- (a) be at 5% realised value FOB where the realised value is calculated by multiplying the quarterly weighted average price per dry tonne of bulk phosphate by a nominal 75,000 dry tonnes per quarter;
- (b) the exchange rate to convert the price from SUS to SAUD in respect of the quarterly weighted average price shall be calculated at the telegraphic transfer buy rate quoted by the Lessee's Australian banker on the date the Lessee receives the funds for the phosphate rock;
- (c) be paid to such person as may be authorised and at such place as may be appointed for that purpose by the Commonwealth within thirty days after the expiry of each quarter in each financial year.

33 The royalties payable after the first five years of this Lease shall be based on the nominal figure of 75,000 tonnes per quarter referred to in clause 3.2 or the actual tonnage shipped, whichever is the greater.

34 During the first five years of this Lease the Lessee shall not pay royalties on phosphate dust, granules and pellets. If the production of phosphate dust, granules and pellets is profitable, the Lessee shall after the first five years of this Lease pay to the Commonwealth royalties per shipped dry tonne of phosphate dust, granules and pellets at the rate of 5% realised value FOB.

Chalk, Stone, Gravel or Sand

35 The Lessee shall during the term of this Lease pay to the Commonwealth royalties per shipped tonne of chalk, stone or gravel quarried, or sand taken, by the Lessee from the Leased Land at the times and in the manner to be agreed by the Lessee and the Commonwealth prior to such export.

36 The rate of royalty payable by the Lessee under clause 3,5 shall be 5% of the realised value FOB.

4

CONSERVATION LEVY

4.1 The Lessee shall during the term of this Lease pay to Parks Australia or such other agency that may be nominated in writing by the Minister, a conservation levy and such levy shall be paid quarterly. The conservation levy shall be used for the purpose of minesite rehabilitation in accordance with the Environment Management Plan and a rehabilitation plan to be developed by Parks Australia in conjunction with the Lessee and agreed to by the Minister for Sport, Territories and Local Government.

4.2 The conservation levy shall be calculated on the basis of -

- (a) \$1.50 per shipped dry tonne of phosphate rock (but not phosphate dust, granules and pellets for the first five years of this Lease), or
- (b) \$1.50 per shipped dry tonne of phosphate rock (but not phosphate dust, granules and pellets for the first five years of this Lease) applied to a nominal minimum tonnage of 350,000 tonnes per annum,

whichever is the greater.

4.3 The conservation levy of \$1.50 per tonne shall be adjusted annually by the Consumer Price Index (all Groups) for Perth Western Australia published by the Australian Bureau of Statistics and shall be reviewed every five years from the date of commencement of this Lease.

4.4 The nominal tonnage rate referred to in clause 4.2(b) shall be reviewed at the end of the first five years of this Lease.

RATES AND CHARGES

5.1 The Lessee shall pay -

- (a) all statutory rates, charges and outgoings in respect of the Leased Land as and when they are assessed and fall due;
- (b) all charges for the power and water consumed on the Leased Land as and when those charges fall due;
- (c) all charges for the port and harbour services provided by the Commonwealth to the Lessee.

5.2 The Lessee acknowledges that the port and harbour facilities and services and the power station facilities and services on Christmas Island currently provided by the Commonwealth may be wholly or partly privatised during the term of this Lease and that upon any privatisation of the port and harbour facilities and services and the power station facilities and services it will be the Lessee's responsibility to negotiate charges with the new provider without any input into such negotiations by the Commonwealth.

5.3 If the Lessee requests that the Commonwealth provide any additional infrastructure for a service which is exclusively or mainly to be used by the Lessee, the Commonwealth may require as a condition of it providing the requested service that the Lessee undertake to meet the whole of the capital and installation costs of providing the additional infrastructure from the Lessee or such part which is attributable to the proposed use by the Lessee of such a service.

6. PURPOSE

The Lessee shall not use or work the Leased Land nor permit it to be used or worked except for the purposes of the Operations without the prior written approval of the Commonwealth.

7. RAINFOREST PROTECTION

The Lessee shall not clear, degrade or damage any primary habitat on Christmas Island.

8. MINE MANAGEMENT

- 8.1 The Lessee shall undertake its Operations on the Leased Land in order to complete its Operations in the scheduled areas by the dates nominated in the Mining Schedule attached at Appendix A Provided That the Lessee may, if it wishes to do so, carry out its Operations specified in the Mining Schedule before the dates set out in that Schedule.
- 8.2 The Mining Schedule shall be reviewed by the Commonwealth and the Lessee annually during the term of this Lease for the purpose of determining whether variations are required to the Mining Schedule. Unless otherwise agreed by the parties a review will be conducted within 1 month of the anniversary date of the commencement of this Lease in each calendar year for the duration of the term of this Lease.
- 8.3 The Commonwealth will not withhold its consent to any variation to the Mining Schedule reasonably required by the Lessee to achieve efficient or commercially viable mining operations in relation to the Leased Land or any part of it.
- 8.4 The Lessee shall undertake to comply with all the requirements of the Environment Management Plan attached at Appendix B.
- 8.5 If the Lessee fails to complete its Operations in accordance with clause 8.1, the relevant scheduled area may be forfeited to the Commonwealth under section 97 of the *Mining Act 1978* (W.A.)(C./.) provided that the Commonwealth has given not less than 28 days notice of the Commonwealth's intention to effect such forfeiture. In the event of such forfeiture the Lessee shall pay to the Commonwealth an amount equal to the royalties that the Commonwealth would otherwise have received from the Lessee in relation to that scheduled area.
- 8.6 The Lessee shall surrender to the Commonwealth those parts of the Leased Land as specified on Which the Lessee has completed its Operations, and at the dates as specified, in the Mining Schedule or any agreed amendments thereof PROVIDED THAT if the Lessee completes its Operations on a specified part of the Leased Land prior to the date specified for that part it shall surrender that part of the Leased Land to the Commonwealth within 30 days of completing its Operations.
- 8.7 If the Lessee fails to surrender a part of the Leased Land as provided in clause 8.6 the Lessee shall pay to the Commonwealth damages calculated on the basis of the current market rental that the Commonwealth would have obtained for that part of the Leased Land but for the Lessee's failure to surrender that part of the Leased Land from the due date for surrender until the actual date of surrender by the Lessee.

- 88 Where part of the Leased Land is forfeited or surrendered by the Lessee under clause 8.5 or 8.6 the Lessee shall, within three months of the forfeiture or surrender and at its cost, demolish all improvements specified by the Commonwealth for demolition and remove all material resulting from such demolition and shall remove all its materials, plant and equipment from the forfeited or surrendered land.

9. ACCESS

- 9.1 The Lessee shall at all times permit the Commonwealth and third parties with the consent of the Commonwealth (with or without stock, vehicles and rolling stock) to have access to and to pass over the Leased Land so long as that access does not unduly prejudice or interfere with the activities of the Lessee under this Lease.
- 9.2 The Lessee shall give to the Commonwealth or its agents, at times agreed between the parties access to the Leased Land to enable rehabilitation work to be carried out by the Commonwealth and such access shall not be unreasonably withheld by the Lessee.
- 9.3 The Lessee shall permit access to any part of the Leased Land by officers, employees and agents of the Commonwealth for the purpose of inspecting the rehabilitation work on the Leased Land carried out by the Lessee or for inspecting any other environmental matters on the Leased Land provided that reasonable notice is given and access is in accordance with the Lessee's safety policies and procedures and such access shall be at reasonable times and shall not unduly interfere with the Operations.
- 9.4 In an emergency the Commonwealth or its agents may enter the Leased Land at any time and such access may involve an interference with the activities of the Lessee under this Lease but the Commonwealth will endeavour to keep such interference to a minimum.

10. RIGHT TO ENTER FOR MAINTENANCE PURPOSES

The Commonwealth, its officers, employees and agents, contractors and consultants shall have the right at any time, upon giving reasonable notice to the Lessee, to enter upon the Leased Land to maintain and do work upon or in relation to any public utilities subsisting over or upon the Leased Land PROVIDED THAT the Commonwealth and the Lessee shall, except in an emergency, first have agreed the times at which such entry and work may be effected, it being the intention of both the Commonwealth and the Lessee that such right of entry and work shall not unreasonably interfere with or cause any unreasonable interruption to the Operations.

11. EASEMENTS

The Commonwealth shall have the right to require the Lessee -

- (a) to grant or consent to the granting of such easements or rights in or over the Leased Land; or
- (b) to permit such use of the Leased Land,

in each case as is or are reasonably necessary in connection with the overall development or use of land on Christmas Island.

11A. RIGHTS TO STONE, GRAVEL, CHALK AND SAND

The Commonwealth shall be entitled to -

- (a) purchase at cost from the Lessee such quantities of stone, gravel and chalk quarried, and sand taken, from the Leased Land by the Lessee as the Commonwealth requires;
- (b) be given priority over the Lessee's other customers (but not including parties that are related to or are subsidiaries of the Lessee or its group of companies) for the supply by the Lessee of stone, gravel, chalk and sand.

12. RETENTION OF BACKFILL

- 12.1 The Lessee shall retain within the Leased Land at all times during the Lease at no charge to the Commonwealth, sufficient backfill material for the next two years to be used by the Commonwealth for its environment levy purposes and by the Lessees for its rehabilitation obligations under the mine field rehabilitation plans forming part of the Environment Management Plan and the *Mining Act 1978 (W.A.)(C.I.)*. Backfill material shall be C Grade phosphate rock. Backfill material containing less than five percent P205 will not be regarded as suitable backfill material unless approved in writing by the Commonwealth.
- 12.2 The mine field rehabilitation plans referred to in clause 12.1 and the sufficiency of stockpiles of backfill material shall be reviewed by the Lessee, the Environment Officer and Parks Australia at annual intervals,

13. EQUIPMENT FOR REHABILITATION

The Lessee shall provide machinery and equipment with operators which the Lessee has at its disposal for carrying out rehabilitation work for the Commonwealth in accordance with rehabilitation plans forming part of the Environment Management Plan at reasonable arms-length commercial rates which are acceptable to the Commonwealth PROVIDED THAT the Lessee shall not be obliged to make available any machinery or equipment which is being used for its Operations.

14. PRIVATE ROADS

- 14.1 The Lessee may construct private roads within the area of the Leased Land PROVIDED THAT such roads are constructed in accordance with the requirements of the Environment Management Plan, including approval by Parks Australia and the Environment Officer,
- 14.2 The Lessee shall be responsible for all costs incurred in the construction and maintenance of any private roads within the area of the Leased Land.
- 14.3 The Lessee shall, at its cost, insure the Lessee and the Commonwealth against public liability in respect of all claims, demands and actions in respect of injury, loss or damage to any person or property however sustained arising out of the use of the private roads at any time during the term of this Lease in an amount of not less than \$5,000,000.00 or such greater amount as the Commonwealth may from time to time reasonably require. The Lessee shall if

required by the Commonwealth produce for inspection by the Commonwealth reasonable proof of the existence of the public liability insurance effected in accordance with this clause and reasonable evidence of its renewal.

- 14.4. Where a private road within the area of the Leased Land is required for public use the Commonwealth may resume the road after giving reasonable notice to the Lessee of the resumption PROVIDED THAT the Lessee's Operations are not unduly affected by the resumption.

15. PUBLIC ROADS

PUBLIC ROADS WITHIN THE BOUNDARIES OF THE LEASED LAND:

- 15.1 Public roads within the boundaries of the Leased Land shall be maintained by the Commonwealth, or any subsequent authority responsible for roads on Christmas Island, to a standard specified by the Commonwealth, or any subsequent authority responsible for roads.
- 15.2 The Lessee shall pay a levy to the Commonwealth, or any subsequent authority responsible for roads on Christmas Island, for the use of the portions of the public roads within the boundaries of the Leased Land such levy to be equal to the cost of maintenance of a private road of the same specifications. Such a levy is to be paid in cash or in such other manner as agreed between the Commonwealth and the Lessee or any subsequent authority for roads on Christmas Island.
- 15.3 The Lessee shall not realign, mine on or under or demolish any public road within the boundaries of the Leased Land without the prior written approval of the Commonwealth, or any subsequent authority responsible for roads on Christmas Island, such approval not to be unreasonably withheld.
- 15.4 The Commonwealth shall indemnify the Lessee on receipt of a written demand from the Lessee in respect of all claims, liabilities, costs and expenses suffered or incurred by the Lessee that in any way relate to or arise out of the Lessee's liability to any third party, whether actual or anticipated, by reason of

the fact that the public road to which the demand relates is within the boundaries of the Leased Land except to the extent that the Lessee's liability to any third party is caused or contributed to by the negligence or 'wilful omission or wrongdoing of the Lessee, its employees or agents.

PUBLIC ROADS GENERALLY:

- 15.5 If the Lessee damages a public road within or outside the boundaries of the Leased Land the Lessee shall compensate the Commonwealth, or subsequent authority responsible for roads on Christmas Island, for the repair of the road. If the Lessee and the Commonwealth, or subsequent authority, cannot agree on the amount of compensation payable, the matter shall be referred to an arbiter to determine the compensation that shall be paid.
- 15.6 The Commonwealth, or any subsequent authority responsible for roads on Christmas Island, shall not seal any public roads necessary for the Lessee's Operations within or outside the boundaries of the Leased Land without the agreement of the Lessee, such agreement not to be unreasonably withheld.
- 15.7 The Commonwealth, or any subsequent authority responsible for roads on

Christmas Island, shall allow the Lessee to use all public roads on Christmas Island, subject to any legislative requirements relating to road use on Christmas Island.

- 15.8 The Lessee shall take out third party insurance for all its vehicles using public roads and shall if required by the Commonwealth produce for inspection by the Commonwealth reasonable proof of the existence of the third party insurance effected in accordance with this clause and reasonable evidence of its renewal.

16. MAINTENANCE AND REPAIR OF IMPROVEMENTS

- 16.1 The Lessee shall at all times during the term of this Lease maintain, repair and keep in repair the improvements on the Leased Land, particularly items identified by the Commonwealth as heritage places, to the satisfaction of the Commonwealth provided that nothing in this clause shall require the Lessee to maintain the improvements to a standard beyond that which would make them reasonably suitable for the purposes for which they are being used.
- 16.2 If the Lessee fails to comply with clause 16.1, the Commonwealth may issue a notice to the Lessee requiring the Lessee to remedy the breach within 30 days of receipt of the notice and if the Lessee fails to remedy the breach the Commonwealth may maintain or repair the improvement at the cost of the Lessee which cost shall be a debt due to the Commonwealth.

17. REMOVAL OF IMPROVEMENTS

- 17.1 At any time up to the twelve months before the expiry of the Lease the Lessee may demolish any improvements on the leased land PROVIDED THAT the Lessee has obtained the prior written approval of the Commonwealth to such demolition and in carrying any such demolition the Lessee complies as far as practicable with the findings of any conservation management plans for those improvements.
- 17.2 During the last twelve months of the Lease the Lessee shall, at its cost, demolish all improvements specified by the Commonwealth for demolition and remove all material resulting from such demolition and shall remove all materials, plant and equipment and, at the expiry of the Lease, leave the Leased Land in a safe, clean and tidy condition PROVIDED THAT where part of the Leased Land is to become part of a national park the Lessee shall demolish and remove all improvements including all slabs, footings, service pipes and ducts to a depth of 0.5 metres below ground level.
- 17.3 Any debris, refuse, materials or equipment which the Lessee does not require as a result of carrying out the demolition work referred to in clause 17.1 shall be dumped, at the Lessee's expense, in accordance with the Commonwealth's reasonable directions at dump sites to be provided by the Commonwealth or at dump sites off-shore PROVIDED THAT the Lessee complies with all relevant legislation relating to off-shore dumping.
- 17.4 The Lessee shall provide to the Commonwealth, at the date of execution of this Lease, a bank guarantee for \$500,000.00 in a form acceptable to the Commonwealth guaranteeing the performance of its obligations under clauses 17.1 and 17.2 PROVIDED THAT the amount of the bank guarantee shall be increased to \$1,000,000.00, plus an adjustment by the annual change in the Consumer Price Index (all Groups) for Perth, when the Lessee has completed the Dust Removal Project.

18. SECURITY AND SAFETY MEASURES

- 18.1 The Lessee shall take such steps as may be reasonably necessary for security and safety purposes on the Leased Land and in particular the Lessee shall comply with the *Mines Safety and Inspection Act 1994 (W.A.)(C.I.)* and the *Occupational Health, Safety and Welfare Act 1984 (W.A.)(C.I.)* and with any relevant national standards and codes of practice relating to occupational health and safety matters declared as such by the National Occupation Health and Safety Commission under the *National Occupation Health and Safety Commission Act 1985 (Cwlth)*.
- 18.2 In the event of any inconsistency between the Acts specified in clause 18.1 the Mines Safety and Inspection Act 1994 (W.A.)(C.I.) shall take precedence.

19. DUST REMOVAL PROJECT

- 19.1 If the Lessee has not completed the Dust Removal Project at the date of execution of this Lease, the Lessee shall provide to the Commonwealth at the date of execution of this Lease a bank guarantee (in addition to the bank guarantee required under clause 17.4) for the sum of \$500,000.00 in a form acceptable to the Commonwealth to ensure the completion by the Lessee of the Dust Removal Project Provided That if the Lessee fails to reach a milestone of the Dust Removal Project by the due date specified in Appendix C the amount of the bank guarantee shall be increased by an amount of \$250,000.00 each time such a milestone is not completed.
- 19.2 The Commonwealth may have recourse to bank guarantees provided by the Lessee pursuant to clause 19.1 where the Lessee has failed to complete the Dust Removal Project by the last due date specified in the Project (being 30 September 1999) or by such later date as agreed by the Minister.
- 19.3 The Commonwealth may only have recourse to the bank guarantees to the extent of the amount reasonably required to perform and complete the Lessee's obligations under the Dust Removal Project.
- 19.4 In the event that the Commonwealth has recourse to the bank guarantee pursuant to clause 19.2, the Commonwealth shall apply any and all money recovered pursuant to the bank guarantee towards the completion of the Dust Removal Project.
- 19.5 The Commonwealth shall authorise the release of all amounts secured by the bank guarantee provided pursuant to clause 19.1 within 7 days of completion of the Dust Removal Project.

20. INDEMNITY

- 20.1 The Lessee shall indemnify and keep indemnified the Commonwealth and its servants agents and contractors in respect of all actions suits claims demands or costs of third parties arising out of or in connection with any work carried out by or on behalf of the Lessee pursuant to this Lease or relating to its activities hereunder or arising out of or in connection with the construction maintenance or use by the Lessee or its servants agents contractors or assignees of the Lessee's works or services the subject of this Lease or the plant apparatus or equipment installed in connection therewith.
- 20.2 The parties acknowledge that there is asbestos in the buildings located on the

Leased Land. The Lessee shall assume all risks of and responsibility for damage, loss or injury to any person attributable, directly or indirectly, to the presence of asbestos in the buildings which results from the operations of the Lessee during the term of the Lease and shall release and indemnify the Commonwealth, its officers, employees and agents against any liability or claim, howsoever arising, in respect of such personal injury, loss or damage.

COMMONWEALTH'S COVENANTS

21. RENEWAL OF THE TERM

- 21.1 The Lessee shall have the right to apply to the Commonwealth for a renewal of this Lease if new reserves of phosphate have been identified, new markets for lower grade phosphate developed or if technology makes economically viable the mining of areas previously considered to be uneconomic and if the Lessee shows to the Commonwealth's reasonable satisfaction that such a renewal of the Lease would have a clear benefit to the Christmas Island community the terms and conditions of such a renewal, if any, to be as agreed between the Commonwealth and the Lessee.
- 21.2 The Commonwealth shall on the written request of the Lessee made at least twelve months before the expiration of this Lease for a renewal of the Lease, and if there shall not be at the time of such request and at the expiration of the term any existing breach of covenant or non-observance of any of the covenants on the part of the Lessee contained in this Lease and if there shall have been no persistent breaches of any such covenants during the term of this Lease, give consideration to the Lessee's request for a renewal of the Lease having regard to the impact of a renewal on Christmas Island's economy, environment and community.

22. PROVISION OF SERVICES

- 22.1 Subject to clause 5.2, the Commonwealth shall provide, at the request of the Lessee, power, water, port and harbour services to the Lessee, its employees and agents.
- 22.2 The Commonwealth will provide electricity to transformers or switchboards at the point of use by the Lessee and will also ensure that meters are installed at appropriate locations so as to enable the Lessee's consumption to be properly monitored.
- 22.3 The Commonwealth will supply water into tanks or other receptacles as the Lessee may reasonably require and will also ensure that meters are installed at appropriate locations so as to enable the Lessee's consumption to be properly monitored such transformers, switchboards and meters referred to in clauses 22.2 and 22.3 to be installed at the Lessee's expense but to be maintained at the Commonwealth's expense and to remain the property of the Commonwealth or subsequent supply authority.
- 22.4 The Commonwealth will make every reasonable effort to provide the Lessee with power, water, port and harbour facilities but cannot guarantee the supply of such facilities since the facilities can be affected by factors outside the Commonwealth's control.

MUTUAL COVENANTS

23. RESUMPTION OF LAND FOR REDEVELOPMENT

- 23.1 Where the Commonwealth requires part of the Leased Land and infrastructure for redevelopment or other purposes the Commonwealth shall give to the Lessee written notice that the part specified in the notice is to be resumed.
- 23.2 Where the Commonwealth serves a notice on the Lessee under clause 23.1 the Lessee shall respond to the Commonwealth, within thirty (30) days of receipt of that notice, advising of the amount it considers to be reasonable compensation for the resumption of the specified part of the Leased Land such amount to be equal to the then current market value of the phosphate reserves contained in or on that specified part.
- 23.3 The Commonwealth shall notify the Lessee within thirty (30) days of receipt of the Lessee's response under clause 23.2 that the Commonwealth either agrees with the compensation amount proposed by the Lessee or that it disagrees with that amount and, if the Commonwealth wishes to continue with the resumption, that the matter is to be referred by the Commonwealth to an arbitrator under the *Commercial Arbitration Act 1985 (W.A.)(C.I.)* for determination of an appropriate compensation amount. Each party shall bear its own costs (including legal costs) in respect of any arbitration under this clause.
- 23.4 Where the Commonwealth notifies the Lessee that it agrees with the compensation amount proposed by the Lessee the Lessee shall yield up that part of the Leased Land to the Commonwealth within thirty (30) days of receipt of the Commonwealth's notice and the Commonwealth shall pay that amount of compensation to the Lessee upon the completion of the resumption of the part of the Leased Land to the Commonwealth.
- 23.5 Where the Commonwealth notifies the Lessee that it does not agree with the compensation amount proposed by the Lessee and that it wishes to continue with the resumption, the Lessee shall yield up that part of the Lease Land to the Commonwealth within thirty (30) days of receipt of the Commonwealth's notice to this effect irrespective of the status of the arbitration proceedings referred to in clause 23.3.
- 23.6 Where the Commonwealth resumes part of the Leased Land under clause 23.1 the Commonwealth shall ensure that the development of the resumed land will not unduly disrupt the Operations of the Lessee.
- 23.7 Where part of the Leased Land is resumed by the Commonwealth under this clause 23 the Lessee shall, within three months of the resumption and at its cost, demolish all improvements specified by the Commonwealth for demolition and remove all material resulting from such demolition and shall remove all its materials, plant and equipment from the resumed land.

24. CONFIDENTIALITY

Except as required by law, no party shall make public any information provided by the other hereunder or pursuant to any agreement or instrument referred to herein without first obtaining the consent of the other party and each party shall have due regard to the interests, obligations and commitments (whether arising under contract or otherwise) of the other party in relation to such information.

25. FORCE MAJEURE

25.1 Performance of

Obligation

Subject as hereinafter provided, the time for the performance of any obligation under or arising out of this Lease, except an obligation to pay money, which performance is delayed by circumstances beyond the reasonable control of the party responsible for the performance of such obligation, shall be extended by the period of the delay, but no longer than the continuance thereof and no party shall be liable in damages or otherwise to any other party nor shall any action, claim or demand be taken or made against that party by reason solely of such delay in the performance of such obligation in circumstances beyond the reasonable control of that party.

25.2 Reasonable Diligence

The party responsible for the performance of any such obligation shall use all reasonable diligence to remove the said circumstances beyond its reasonable control as soon as is reasonably practicable after notice of the same shall have come to its attention save and except that the settlement of any strike, lockout or other industrial dispute shall be entirely within the discretion of the party directly concerned therewith and nothing herein shall require the settlement thereof by acceding to the demands of the opposing party or parties where such course is considered inadvisable in the absolute discretion of the party so concerned.

25.3 Keep Informed

Each party shall keep the other promptly informed of any delay in the performance of any obligation on its part under or arising out of this Lease, where such delays are caused by circumstances beyond the reasonable control of such party, of the likely duration of such delays as a consequence thereof and of the cessation of such circumstances.

25.4 Circumstances Beyond the Reasonable Control

In this clause, the express "circumstances beyond the reasonable control" shall include, without limitation, acts of God, earthquakes, floods, storms, tempests, washaways, fires not caused by negligence or wilful misfeasance of a party, acts of war, acts of public enemies, riots, civil commotions, strikes, lockouts, bans, "go-slow" activity, stoppages, restraints of labour or other similar acts (whether partial or entire), acts or omissions of any government or governmental authority or instrumentality other than the Commonwealth (whether legislative, executive or administrative), shortages of labour or essential materials, reasonable inability to obtain contractors, delays of contractors, delays or restrictions on the remittance or provision of funds to a party from any place outside Australia, withdrawal of the services under clause 22, inability or delay in obtaining any government or local authority approval, permit or licence or any other cause whether of a kind specifically enumerated above which is not reasonably within the control of the party to this Lease carrying out or obliged to carry out any obligation under this Lease.

25.5 Give Notice of Delay

The party whose performance of any obligation is affected by any of the circumstances beyond the reasonable control (hereinbefore referred to) shall,

as soon as is reasonably practicable, give notice to the other party of each event alleged to constitute such circumstances and shall, subject to clause 25.2, use its best endeavours to minimise the effect of such circumstances as soon as is reasonably practicable after the occurrence thereof.

26. **NOTICES**

That any notice requirement demand consent or other communication to be aiven to or served upon either party to this Lease shall be deemed to have been duly given or served if sianed by or on behalf of the party giving the same and delivered to or sent in a prepaid letter addressed to the other party at the registered office or principal office of such party on Christmas Island, but if for any reason the receiving party does not have a registered or principal office on Christmas Island, then at the usual or last-known address of such party.

27. **PRECEDENCE**

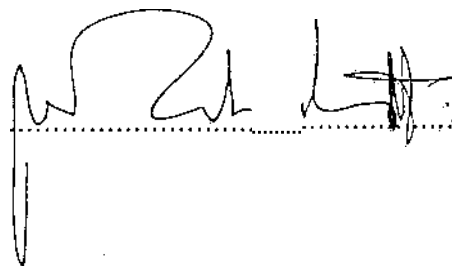
To the extent that the terms contained in the Sixth Schedule of this Lease are inconsistent with the provisions of the Mining Act 1987 (W.A)(C.I.) the terms of this Lease shall prevail.

28. **APPLICABLE LAW**

This Lease shall be interpreted according to the law for the time being in force in the Territory of Christmas Island.

In addition to any specific conditions that are endorsed on this instrument, the holder in exercising the rights granted herein must first ensure that the necessary consents and permission have been obtained and compensation has been agreed to or determined in respect to certain Crown land, Public Reserves, etc., private land and where the lawful rights of other land users are concerned.

Signed by the Minister on behalf)
of the COMMONWEALTH)
OF AUSTRALIA)
on 4th August 1997)



Appendix III: EPBC Conditions for Approval of Airport Extension Salvage Operation

COMMONWEALTH OF AUSTRALIA

ENVIRONMENT PROTECTION AND BIODIVERSITY CONSERVATION ACT 1999

DERISION TO APPROVE THE TAKING OF AN ACTION

Pursuant to section 133 of the *Environment Protection and Biodiversity Conservation Act 1999*, I, GERARD PATRICK EARLY, First Assistant Secretary, Approvals and Wildlife Division, Department of the Environment and Heritage, a delegate of the Minister for the purposes of that section, approve the taking of the following action:

The salvage, transport and process of phosphate resources from the extended airport site on Christmas Island (EPBC 2003/1217).

by Phosphate Resources Ltd subject to the conditions set out in ANNEXURE 1.

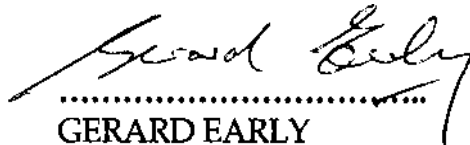
This approval has effect for:

Sections 18 and 18A (Listed threatened species and communities) of the *Environment Protection and Biodiversity Conservation Act 1999*

Sections 26 and 27A (Protection of the environment from actions involving Commonwealth land) of the *Environment Protection and Biodiversity Conservation Act 1999*

This approval has effect until January 2015.

Dated this 6th day of 2005


.....
GERARD EARLY

ANNEXURE 1

1. The person taking the action must undertake works as set out in the *Amended Preliminary Information - Salvage Phosphate Recovery at Christmas Island Airport Extension*, July 2004.
2. Prior to the commencement of operations, the person taking the action must submit for the Minister's approval a plan or plans for the Salvage Phosphate Recovery at Christmas Island Airport Extension to manage the impacts of the action on listed threatened species and communities, in particular *Carmona retusa*, and on the environment on Commonwealth land. The plan(s) must include:
 - (a) the establishment of appropriate buffer zones between areas to be mined and areas of native vegetation in order to minimise edge effects from clearing activities;
 - (b) the locations of *Carmona retusa* clearly marked together with 30 metre buffers zones to protect the plant from mining activities;
 - (c) measures for erosion and sediment control;
 - (d) measures to identify Yellow Crazy Ants and their eradication;
 - (e) topsoil management practices;
 - (f) measures to protect the heritage values of the Phosphate Hill Historic Area, including 40 metre buffer zone adjacent to the Area; and
 - (g) a process of stakeholder consultation, including consultation with the Government Conservator on buffer zones and *Carmona retusa*, the Environmental Officer Indian Ocean Territories on erosion and Christmas Island Airport Manager on airport operations.

The approved action must not commence until the plan has been approved. The approved plan must be implemented.

3. Prior to the commencement of operations, the person taking the action must submit for the Minister's approval a rehabilitation plan for the Salvage Phosphate Recovery at Christmas Island Airport Extension. The plan must include:
 - (a) measures for the redistribution of topsoil;
 - (b) weed management procedures;
 - (c) measures to ensure ongoing protection of *Carmona retusa*;
 - (d) benchmarks for species diversity and cover;
 - (e) specific monitoring and reporting actions designed to demonstrate progress with stated rehabilitation objectives and benchmarks; and
 - (f) a process of stakeholder consultation including consultation with the Christmas Island Airport Manager on airport operations.

The approved action must not commence until the plan has been approved. The approved plan must be implemented.

4. Any additional fill material required from outside the Salvage Phosphate Recovery site at Christmas Island Airport Extension by the person taking the action must not be composed of, or include, topsoil.
5. Five years following the commencement of operations, the person taking the action must ensure that an independent audit of compliance with the plans under paragraphs 2 and 3 is conducted and a report submitted to the Minister. The

independent audit must be approved by the Minister prior to the commencement of the audit. Audit criteria must be agreed to by the Minister and the audit report must address the criteria to the satisfaction of the Minister.

6. Prior to the commencement of operations, the person taking the action must lodge an unconditional bank guarantee with a financial institution, to be approved by the Minister, to secure compliance with paragraphs 2 and 3 of this approval. The amount to be guaranteed by the person taking the action must be \$260,000. The person taking the action will forfeit this unconditional bank guarantee in the event that the person taking the action does not comply with paragraphs 2 and 3 of this approval.
7. If the person taking the action wishes to carry out any activity otherwise than in accordance with the plans referred to in paragraphs 2 and 3 the person taking the action may submit for the Minister's approval a revised version of any such plan. If the Minister approves such a revised plan, that plan must be implemented in place of the plan originally approved.
8. If the Minister believes that it is necessary or desirable for the better protection of the listed threatened species and communities and on the environment on Commonwealth land, the Minister may request the person taking the action to make specified revisions to the plan approved pursuant to paragraphs 2 and 3 and submit the revised plan for the Minister's approval. The person taking the action must comply with any such request. The revised approved plan must be implemented.
9. By 1 July each year after the commencement of operations, the Resident Manager of the person taking the action must provide to the Minister a certificate reporting details that the person taking the action has complied with the conditions of approval.
10. Within five years of the date of this approval, the person taking the action must provide to the satisfaction of the Minister evidence that the proposal has been substantially commenced. If the Minister is not satisfied that there has been substantial commencement of the Phosphate Recovery at the Christmas Island Airport Extension, the Phosphate Recovery at the Christmas Island Airport Extension must not thereafter be commenced.

Appendix IV: List of acronyms

DRALGAS	Department of Regional Australia, Local Government, Arts and Sport
AHC	Australian Heritage Council
CIP	Christmas Island Phosphates
DER	Department of Environment and Conservation
SEWPAC	Department of Sustainability, Environment, Water, Population and Communities
DMP	Department of Minerals and Petroleum
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement
EMS	Environmental Management System
EMP	Environmental Management Plan
ISO14001	International Organisation for Standardisation – Environmental Management Systems
NEPM	National Environmental Protection Measure
Parks	Parks Australia Christmas Island
PRL	Phosphate Resources Limited
SOCI	Shire of Christmas Island

Appendix V: List of procedures, forms and reference documents to support the EMP

PROCEDURES	ENV-SOP-001: Shiploading Procedure
	ENV-SOP-002: NSI Turbo Burner – Operation and Maintenance
	ENV-SOP-003: Waste Management Disposal
	ENV-SOP-004: Fuel and Oil Spill Management
	ENV-SOP-005: Environmental Incident Reporting
	ENV-SOP-006: Water Management – Water Sampling
	ENV-SOP-007: Operation and Maintenance of DustTrak Monitoring Equipment
	ENV-SOP-008: Chemical Spraying and Equipment Maintenance
	ENV-SOP-009: Bioremediation Processes
	ENV-SOP-010: Quarterly Facility Audit/Inspection Procedure
	ENV-SOP-011: Quarterly Field Audit/Inspection Procedure
	ENV-SOP-012: Vegetation Clearing
	ENV-SOP-013: Oil/water separator operation
	ENV-SOP-014: Lab pH Testing
FORMS	ENV-FORM-001: FEL Request Shiploading
	ENV-FORM-002: Shiploader Service and Maintenance Report
	ENV-FORM-003: Shiploader Electrical Report
	ENV-FORM-004: Shiploader Housekeeping Report
	ENV-FORM-005: Shiploader Mimic Room Report
	ENV-FORM-006: Environmental Verification Report
	ENV-FORM-007: Water Sampling Chain of Custody
	ENV-FORM-008: CIP Environmental Site Inspection – Admin Finance Building
	ENV-FORM-009: CIP Environmental Site Inspection – Bioremediation Shed
	ENV-FORM-010: CIP Environmental Site Inspection – Burner Shed
	ENV-FORM-011: CIP Environmental Site Inspection – Cross Country Conveyors
	ENV-FORM-012: CIP Environmental Site Inspection – Downhill Conveyors
	ENV-FORM-013: CIP Environmental Site Inspection – Dryers Precinct
	ENV-FORM-014: CIP Environmental Site Inspection – Dustbagging
	ENV-FORM-015: CIP Environmental Site Inspection – Electrical Workshop
	ENV-FORM-016: CIP Environmental Site Inspection – Field & Green Waste
	ENV-FORM-017: CIP Environmental Site Inspection – FPM Workshop
	ENV-FORM-018: CIP Environmental Site Inspection – Laboratory
	ENV-FORM-019: CIP Environmental Site Inspection – LB4 ROM
	ENV-FORM-020: CIP Environmental Site Inspection – MPM Workshop
	ENV-FORM-021: CIP Environmental Site Inspection – Clean-up Crew Yard
	ENV-FORM-022: CIP Environmental Site Inspection – Scrap Metal Yard
	ENV-FORM-023: CIP Environmental Site Inspection – Shiploading Precinct
	ENV-FORM-024: CIP Environmental Site Inspection – Toyota Workshop
	ENV-FORM-025: CIP Environmental Site Inspection – Warehouse
	ENV-FORM-026: CIP Environmental Mine Site Inspection – ML
	ENV-FORM-027: Incident/Complaint Reporting Form
	ENV-FORM-028: Desktop Clearing Checklist
	ENV-FORM-029: Clearing Approval Completion List
	ENV-FORM-030: Waste Management Recording
	ENV-FORM-031: Energy Consumption Recording
REFERENCE DOCUMENTS	ENV-REFDOC-001: CIP Shiploading Matrix
	ENV-REFDOC-002: CIP Environmental Management Plan 2012-2019
	ENV-REFDOC-003: Licence for Prescribed Premises 2012 Licence Number 8083/9
	ENV-REFDOC-004: NSI Turbo Burner Operations Manual
	ENV-REFDOC-005: DustTrak Machine Components and Maintenance Schedule
	ENV-REFDOC-006: Bioremediation Testing Colour Charts
	ENV-REFDOC-007: CIP Water Sampling Locations

Appendix VI Proforma for Annual Review and Periodical Audit of Mgmt Plan

Achievement of Key Management Strategies

Area	Key Management Strategy	Progress	Further action
6.1 Operational Implementation	1. Review current operational procedures to determine what procedures are required to support the revised EMP (H-KMS).		
	2. Prepare new operational procedures and ensure staff are aware of the new procedures and where relevant trained in their use (H-KMS).		
	3. Review existing infrastructure that presents environmental risks and consider options for improvement and replacement, with high priority actions incorporated into the capital replacement program (e.g. dust minimisation through equipment replacement and modifications) (H-KMS).		
6.2 Monitoring	1. Establish a records management framework and guidelines for storage of the EMP, operational prescriptions, audit and monitoring data, and relevant correspondence and reports that support the EMS (H-KMS).		
	2. Ensure records, procedures are reviewed and updated as necessary and inform staff accordingly (H-KMS).		
6.3 Documentation	1. Establish a records management framework and guidelines for storage of the EMP, operational prescriptions, audit and monitoring data, and relevant correspondence and reports that support the EMS (H-KMS).		
	2. Ensure records, procedures are reviewed and updated as necessary and inform staff accordingly (H-KMS).		
6.4 Reporting	1. Provide annual monitoring and audit reports to DER in accordance with the Licence for Prescribed Premises (H-KMS).		
	2. Provide an annual report to DER for clearing permits in accordance with permit conditions (H-KMS).		
	3. Provide an Annual Environmental Report to DMP in accordance with Licence requirements (H-KMS).		
6.5 Audit and Review	1. Undertake an annual assessment of the implementation of the EMP (see indicative proforma at Appendix VI) against the KPI's and Key Management Strategies (H-KMS).		
	2. Undertake an external audit by a qualified environmental auditor every 3 years with the results of this review used for the amendment of the EMP (H-KMS).		
	3. Commence a full review of the EMP in 2016 with the aim of having this finalised and approved by the Commonwealth Government by the end of 2017 (H-KMS).		
6.6 Education, Awareness & Training	1. Ensure all new staff are inducted in environmental policy and company commitments, as well as procedures relevant to the duties of their position (H-KMS).		
6.7 Mine & Infrastructure Decommissioning	1. Develop a draft mine closure plan for consideration by DMP taking into account mining lease conditions, make safe provisions, rehabilitation requirements (where relevant), heritage issues and public safety issues (H-KMS).		
7.1 Air Quality	1. Monitor fuel and stack emissions in accordance with the Licence for Prescribed Premises (H-KMS).		

Area	Key Management Strategy	Progress	Further action
	2. Report annually on monitoring and compliance with Licence for Prescribed Premises (H-KMS).		
7.2 Groundwater & Soil Contamination	1. Undertake storage, handling and management of hazardous substances across CIP operations in accordance with all requirements of the environmental licence and relevant legislation (H-KMS).		
	2. Maintain a pollution control record covering all site activities and report to DER as required by Licence for Prescribed Premises to operate, and the <i>Environmental Protection Act 1986 (WA) (CI)</i> (H-KMS).		
	3. Remove and treat all soils contaminated with petroleum products at the bioremediation shed (H-KMS).		
	4. Undertake sampling and analysis of runoff from oil/water separators and sediment traps, as required by Environmental License and report sampling results in AER (H-KMS).		
	5. Report any target exceedances to DER and trigger remedial actions as required (H-KMS).		
	6. Monitor neutralising tanks. Sample and laboratory test results to be noted in laboratory log book; and reported in the Annual Environmental Report (DER & DMP) (H-KMS).		
7.3 Marine Impacts (KPI)	1. Replace the loading chute delivery system with the Cleveland system to reduce dust emissions (H-KMS).		
	2. Maintain log recording incidents of equipment failure and incidents where pollution control equipment was not utilised during ship loading (H-KMS).		
	3. Implement dust monitoring as per the DER Licence (see Section 7.7) (H-KMS).		
7.4 Landforms & Soils (KPI)	1. Undertake mine site planning (i.e. an <i>Erosion Control Plan</i>) for all clearing operations to identify potential erosion potential and mitigation strategies in liaison with neighbouring land managers (where applicable) (H-KMS).		
	2. Implement mitigations strategies as appropriate to minimise erosion which may include; <ul style="list-style-type: none"> • diversion of flow into pinnacle or natural areas as feasible to prevent sediment transport and erosion; • use of vegetative buffer zone in mine areas; • loosening of compacted soil prior to leaving site; • construction of earth dykes (bund drains) and earth swales (v drains) for onsite water conveyance to appropriate areas; • use earth drains to help direct incoming stormwater around mine area along periphery; and • implementing the mining technique of benching where applicable (H-KMS). 		
	3. Control erosion resulting from water draining off hardstand and permanent infrastructure through; <ul style="list-style-type: none"> • construction of earth dykes (bund drains) and earth swales (v drains) for on-site water conveyance to appropriate areas; • construction of erosion works (e.g. compensation basins) to retain stormwater on site longer and to reduce sediment content and erosion potential of water leaving site; 		

Area	Key Management Strategy	Progress	Further action
	<ul style="list-style-type: none"> • continuous monitoring and maintenance of on-site drainage and erosion works; • regular maintenance of the drainage system (e.g. cleanup and clearing)-particularly prior to high rainfall periods; • placement of reject rock under the cross country conveyor system to reduce erosion potential of water. Minimise environmental impacts on areas surrounding processing activities as a result of stormwater runoff and erosion; • containing all runoff from ROM pads in sediment control structures; and • maintaining and upgrading existing drainage network as required. (H-KMS). 		
7.5 Terrestrial Habitats and Vegetation (KPI)	1. Provide appropriate information to Government to enable assessment and approval of clearing permits within reasonable timeframes (H-KMS).		
	2. Ensure clearing permits are obtained for all clearing undertaken by CIP (H-KMS).		
	3. Undertake appropriate site inspections, training, onsite briefings, and supervision to ensure the conditions of mine site operations are fully met (H-KMS).		
	4. Ensure appropriate pre-clearing survey and flagging is undertaken to identify areas to be cleared, boundaries of National Park and other areas to be protected (heritage and/or rainforest areas) (H-KMS).		
	5. Implement an appropriate onsite audit and reporting program for mine site operations to assess compliance with clearing conditions and boundary impacts to surrounding vegetation and habitats (H-KMS).		
	6. Identify any primary habitat within MCI-70/1 and ensure appropriate management of mining activities to protect these areas (H-KMS).		
	7. Conduct environmental awareness training for all minefield operators to ensure an understanding of CIP environmental obligations and job specific requirements (H-KMS).		
	8. Undertake rehabilitation for the Airport Salvage operation (MCI-70/10) in accordance with EMP (see Appendix III) (H-KMS).		
7.6 Fauna & Flora	<ul style="list-style-type: none"> • Comply with all conditions of clearing permits that relate to red crabs (H-KMS). 		
	<ul style="list-style-type: none"> • Schedule haulage, mining operations and road maintenance to minimize vehicle traffic on high risk roads during the migration periods including; • scheduling resource supply from areas closer to the processing plant to minimize mortality during migration; • the use of alternative haulage routes during migration (determined by crab movements); • reduce or cease haulage during heavy crab movements across mining routes; • restrict haulage during peak migration times (from 6.00 – 8.00am and 5.00 – 7.00pm); and • restrict use of the grader for road maintenance in areas of high or moderate crab densities during the migration (H-KMS). 		

Area	Key Management Strategy	Progress	Further action
7.6.2 Robber Crabs	1. Remove Robber Crabs by trapping and relocation before areas are cleared for mining operations and comply with all related conditions of clearing permits (H-KMS).		
7.6.3 Birds	1. Assess potential impacts on Abbotts Booby and other threatened species in the clearing permit approval process to ensure no significant impacts on habitat or abundance as a result of clearing (H-KMS).		
	2. Comply with all conditions of clearing permits (H-KMS).		
7.6.4 Bats	1. Undertake pre-clearance surveys (H-KMS).		
	2. Fulfil Vegetation Clearance Protocol (H-KMS).		
	3. Implement Pipistrelle Alert Plan if required. (H-KMS).		
7.6.5 Listed Flora	1. Undertake appropriate assessments in clearing permit approvals processes to ensure no threatened flora species are located within proposed mining areas (H-KMS).		
7.7 Community Values (KPI)	1. Maintain appropriate processes and mechanisms to receive and record public dust and noise complaints (H-KMS).		
	2. Investigate options to minimise the need for 'dust process bypass' (e.g. more storage) and improve the management and containment of dust where this activity occurs (H-KMS).		
	3. Replace loading chutes with the "Cleveland" system to reduce dust emissions during ship loading (H-KMS).		
	4. Monitor dust emissions during ship loading using portable equipment at one of seven selected and approved sites (H-KMS).		
	5. Establish permanent dust monitoring equipment (TEOM's) as soon as practical at the wharf and CITA to provide 24/7 monitoring (i.e. replacement of portable monitoring approach) (H-KMS).		
	6. Check baghouse performance at least twice weekly through pressure drop testing, and replace failed bags (H-KMS).		
	7. Report monitoring results and incident/compliant reporting as per the requirements of the Licence for Prescribed Premises (H-KMS).		
7.8 Heritage	1. Maintain a register of heritage sites on CPI lease areas (H-KMS).		
	2. Ensure the presence and significance of heritage sites are considered before any clearing or major works to remove existing structures (H-KMS).		
8.1 Weeds & Pests	1. Undertake weed control on a prioritised basis based on meeting regulatory requirements, minimising the establishment of new populations of weeds into 'clean' areas, and protecting important habitat communities from priority weed species (H-KMS).		
8.2 Waste Management	1. Continue to comply with appropriate standards, licences and legislation in respect to the disposal of waste products (H-KMS).		

Area	Key Management Strategy	Progress	Further action
8.3 Energy Consumption	1. Monitor and record energy use for each operational area (H-KMS).		
	2. Undertake reporting on site wide fuel consumption and emissions for the NPI, with reporting as per NPI guidelines for Mining and for Fossil Fuel Electric Power Generation (H-KMS).		

Achievement of Minimum Compliance Targets

Area	Target(s)	Performance Measures	2012 Benchmark	Annual Result (target met or not met)	Comments and or action
6.1 Operational Implementation	<ul style="list-style-type: none"> Adequate resources are allocated to ensure the implementation of the EMP and the appropriate achievement of environmental targets. 	Resources applied to environmental programs; <ul style="list-style-type: none"> Staff FTEs Total budget allocation 			
6.2 Monitoring	<ul style="list-style-type: none"> All statutory monitoring completed on time and to the required government standards. All other monitoring undertaken to facilitate internal reporting, review and audit requirements. 	Number of technical divergences and infringements due to not meeting government requirements or standards.			
6.3 Documentation	<ul style="list-style-type: none"> Records maintained in accordance with records management framework (as confirmed through annual review checklist). 	Annual checklist of records.			
6.4 Reporting	<ul style="list-style-type: none"> Undertake all regulatory reporting on time and including all required information. 	Number of technical divergences and infringements due to not meeting government reporting requirements.			
6.5 Audit & Review	<ul style="list-style-type: none"> EMS is responsive to operational and legislative changes and EMP regularly reviewed and updated. 	Successful completion of annual audit process and transmission of reports to the Board by September each year.			

Area	Target(s)	Performance Measures	2012 Benchmark	Annual Result (target met or not met)	Comments and or action
	<ul style="list-style-type: none"> A revised EMP is completed and approved by the Commonwealth Government by the end of 2017. 	Annual review of EMS & EMP by September each year.			
6.6 Education, Awareness & Training	<ul style="list-style-type: none"> All senior managers are aware of the EMP and systems to support the EMP, and commitments relevant to their operational role. Inductions completed for all new staff on environmental policy, procedures and systems relevant to their role. All CIP staff are aware of the company environmental policy and the importance of environmental performance to the ongoing success of the company's operations. 	Proportion of staff who have undertaken inductions covering CIP's key environmental management requirements.			
		Proportion of senior manager with required knowledge of EMS, EMP & key strategies and commitments (via survey).			
		Proportion of staff with knowledge of CIP Environmental Policy and broad requirements and management (via survey).			
6.7 Mine & Infrastructure Decommissioning	<ul style="list-style-type: none"> Completion of a draft mine closure plan by July 2013 for consideration by DMP. Completed and signed off Mine Closure Plan by 2014. 	Number of incidents of non-compliance with legislation.			
		No. of hectares of the mining lease relinquished.			
7.1 Air Quality	<ul style="list-style-type: none"> Compliance with the Licence for Prescribed Premises 	Sulphur content in fuel			
		Sulphur stack emissions			
7.2 Groundwater & Soil Contamination	<ul style="list-style-type: none"> All regulatory requirements met. No major accidental spillage of hydrocarbons (i.e. >100 litres) or other hazardous materials (>20 litres). 	Number of environmental incidents.			
		Proportion of hydrocarbon spills >5 litres that are reported, contaminated soils removed and remediated.			
		Hydrocarbon concentration in Washdown Bay separator runoff.			

Area	Target(s)	Performance Measures	2012 Benchmark	Annual Result (target met or not met)	Comments and or action
	<ul style="list-style-type: none"> All minor incidents of accidental spillage (>5 litres) to be reported, clean up actioned, and causes investigated. 	Suspended solids concentration in Washdown Bay separator runoff Laboratory acid wastes 5.5 pH or above.			
7.3 Marine Impacts	<ul style="list-style-type: none"> Compliance with DER Licence for Prescribed Premises All internal audits completed and actioned to minimise potential phosphate inputs to the marine environment. 	No of compliance breaches			
		No of cleanup actions not completed.			
7.4 Landforms & Soils	<ul style="list-style-type: none"> All potential erosion risks assessed, prioritized and site plans developed by 2013. Maintain sediment in runoff exiting the site at <100mg/L 	Proportion of drainage systems inspected and maintenance completed.			
		Suspended solids in runoff.			
7.5 Terrestrial Habitats & Vegetation	<ul style="list-style-type: none"> No clearing of primary habitat¹. Full compliance with clearing permits conditions. 	Compliance with permit conditions			
7.6 Fauna & Flora	<ul style="list-style-type: none"> Compliance with clearing permit conditions and Parks road closures 	No of reported incidents of closed roads being used by CIP staff.			
7.6.2 Robber Crabs	<ul style="list-style-type: none"> Compliance with all related conditions of clearing permits. 	Mortality due to CIP operations.			
7.6.3 Birds	<ul style="list-style-type: none"> Compliance with all related conditions of clearing permits. 	Impact on Abbotts Booby nest sites.			

¹ Primary habitat is defined in MCI-70/1 as: “any vegetation community that consists of vegetation in a climax state which has significant conservation value and where the overall habitat has not been modified by human activity”

Area	Target(s)	Performance Measures	2012 Benchmark	Annual Result (target met or not met)	Comments and or action
7.6.4 Pipistrelle Bats	<ul style="list-style-type: none"> Compliance with all related conditions of clearing permits for western areas. No mortality of Pipistrelle bats if located. 	Meet all requirements of the Pipistrelle bat management plan.			
7.6.5 Listed Flora	<ul style="list-style-type: none"> No clearing of threatened species. 	Threatened species impacted by mining			
7.7 Community Values	<ul style="list-style-type: none"> To meet all regulatory monitoring and reporting requirements. Progressive reduction in instances where NEPM standards are exceeded. Respond to public complaints within 24hrs. 	No of public complaints.			
		No of days in non-compliance of dust emissions levels (NEPM standards).			
		Dust spillage recovered (vacuum truck).			
7.8 Heritage	<ul style="list-style-type: none"> Compliance with <i>Australian Heritage Commission Act 1975</i>. 	Listed heritage sites maintained.			
8.1 Weeds & Pests	<ul style="list-style-type: none"> Compliance with the weed control requirements of clearing permits and the Quarantine Act 1908. Compliance with CIP washdown procedures 	Annual inspections of heritage sites undertaken and condition assessed.			
8.2 Waste Management	<ul style="list-style-type: none"> All wastes disposed of in accordance with regulatory requirements. A reduction in the quantity of waste disposed of at landfill* 	Waste to landfill			
		Percentage of wastes recycled and reused			
8.3 Energy Consumption	<ul style="list-style-type: none"> Meet all legislative reporting requirements 5% reduction in energy use within 3 years. 	Total energy/tonne of phosphate exported. Electricity consumption/tonne of phosphate exported.			

Appendix VII: Implementation Schedule

Area	STRATEGY	Ongoing or specific task	13	14	15	16	17	Comment
6.1 Operational Implementation	1. Review current operational procedures to determine what procedures are required to support the revised EMP (H-KMS).							
	2. Prepare new operational procedures and ensure staff are aware of the new procedures and where relevant trained in their use (H-KMS).							
	3. Review existing infrastructure that presents environmental risks and consider options for improvement and replacement, with high priority actions incorporated into the capital replacement program (e.g. dust minimisation through equipment replacement and modifications) (H-KMS).							
	4. Ensure adequate staff resources are provided ensure the implementation of the EMP and achievement of the management commitments and targets (H).							
	5. Improve environmental reporting at Board and senior management levels to ensure management is aware of resource needs to address environmental performance and in particular where significant risks are identified that require improvement and management support (H).							
6.2 Monitoring	1. Establish a records management framework and guidelines for storage of the EMP, operational prescriptions, audit and monitoring data, and relevant correspondence and reports that support the EMS (H-KMS).							
	2. Ensure records, procedures are reviewed and updated as necessary and inform staff accordingly (H-KMS).							
	3. Investigate software or other management systems to structure the storage and access of environmental documentation and data (H).							
	4. Undertake an annual review of operational procedures to ensure these are up to date, easily accessible to staff and ensure this process is recorded for future audits (H).							
	5. Maintain a secure backup and archival system (H).							
	6. Ensure the EMP is accessible in hard copy and electronic format for all staff (M).							
6.3 Documentation	1. Establish a records management framework and guidelines for storage of the EMP, operational prescriptions, audit and monitoring data, and relevant correspondence and reports that support the EMS (H-KMS).							
	2. Ensure records, procedures are reviewed and updated as necessary and inform staff accordingly (H-KMS).							
	3. Investigate software or other management systems to structure the storage and access of environmental documentation and data (H).							
	4. Undertake an annual review of operational procedures to ensure these are up to date, easily accessible to staff and ensure this process is recorded for future audits (H).							
	5. Maintain a secure backup and archival system (H).							

Area	STRATEGY	Ongoing or specific task	13	14	15	16	17	Comment
	6. Ensure the EMP is accessible in hard copy and electronic format for all staff (M).							
6.4 Reporting	1. Provide an annual report to DER in accordance with the Licence for Prescribed Premises by 1 September each year (H-KMS).							
	2. Provide an annual report to DER for clearing permits in operation by March each year (H-KMS).							
	3. Provide an Annual Environmental Report to DMP in March each year (H-KMS).							
	4. Provide an annual internal report coinciding with the financial year to the CIP Board on performance against the EMP targets and any significant issues to be addressed in the coming financial year (H).							
	5. Include a section on environmental performance in the CIP Annual Report (H).							
	6. Develop and implement a system (including standardised formats) of internal operational reporting to senior managers and supervisors to communicate the level of achievement of environmental performance and actions required to address emerging issues (H).							
	7. Liaise with DMP and DER to consider ways of simplifying the current level of reporting and where possible coordinating reporting periods and content (M).							
6.5 Audit and Review	1. Undertake an annual assessment of the implementation of the EMP (see indicative proforma at Appendix?) against the KPI's and Key Management Strategies (H-KMS).							
	2. Undertake an external audit by a qualified environmental auditor every 3 years with the results of this review used for the amendment of the EMP (H-KMS).							
	3. Commence a full review of the EMP in 2016 with the aim of having this finalised and approved by the Commonwealth Government by the end of 2017 (H-KMS).							
6.6 Education, Awareness & Training	1. Ensure all new staff are inducted in environmental policy and company commitments, as well as procedures relevant to the duties of their position (H-KMS).							
	2. Maintain a high level of staff awareness through newsletter, staff updates, formal reporting at key senior management meetings, and company internal and external reporting (H).							
	3. Maintain and regularly update work procedures and ensure staff are fully aware of the existence and content of those procedures relevant to their company role (H).							
	4. Reinforce positive environmental performance, actions and outcomes through awards and other recognition strategies (M).							
	5. Undertake disciplinary and/or retraining actions for staff failing to observe defined policy, procedures, and commitments in the EMP (M).							
	6. Develop an annual survey for senior staff & a random selection of general employees to monitor the level of understanding of the company's environmental policy, commitments and systems, and effectiveness of education and training programs (M).							

Area	STRATEGY	Ongoing or specific task	13	14	15	16	17	Comment
6.7 Mine & Infrastructure Decommissioning	1. Develop a draft mine closure plan for consideration by DMP taking into account mining lease conditions, make safe provisions, rehabilitation requirements (where relevant), heritage issues and public safety issues (H-KMS).							
	2. Prioritise and plan a program to meet statutory relinquishment conditions for mined areas, and progressively return completed areas to the Commonwealth (H).							
	3. Develop a mine decommissioning plan in liaison with the Commonwealth and consistent with the mining leases (M).							
	4. Liaise with Parks to determine areas that are likely to be rehabilitated under the Christmas Island Minesite to Forest Rehabilitation Plan and identify potential efficiencies than can be achieved through coordinating earthworks and other activities (M).							
	5. Complete mining enclave areas in national parks as soon as practicable (M).							
7.1 Air Quality	1. Monitor fuel and stack emissions in accordance with the Licence for Prescribed Premises (H-KMS).							
	2. Report annually on monitoring and compliance with Licence for Prescribed Premises (H-KMS).							
	3. Liaise with DER to seek amendment of monitoring condition of the Licence for Prescribed Premises to reduce frequency of stack monitoring from quarterly to annual (H).							
7.2 Groundwater & Soil Contamination	1. Undertake storage, handling and management of hazardous substances across CIP operations in accordance with all requirements of the environmental licence and relevant legislation (H-KMS).							
	2. Maintain a pollution control record covering all site activities and report to DER as required by Licence for Prescribed Premises to operate, and the <i>Environmental Protection Act 1986 (WA) (CI)</i> (H-KMS).							
	3. Remove and treat all soils contaminated with petroleum products at the bioremediation shed (H-KMS).							
	4. Undertake sampling and analysis of runoff from oil/water separators and sediment traps, as required by Environmental License and report sampling results in AER (H-KMS).							
	5. Report any target exceedances to DER and trigger remedial actions as required (H-KMS).							
	6. Monitor neutralising tanks. Sample and laboratory test results to be noted in laboratory log book; and reported in the Annual Environmental Report (DER & DMP) (H-KMS).							
	7. Ensure appropriate maintenance of the oil/water separators and sediment traps at MPM workshop and LB4 to facilitate effective operation of this equipment (H).							
	8. Ensure the appropriate management of all waste management facilities (see Section 8.2) (H).							
	9. Undertake quarterly internal audits of hydrocarbon management and preparedness and report any formally report any inadequacies to trigger appropriate actions to address (H).							
	10. Ensure a high level of preparedness for accidental pollution incidents through training and provision of the necessary equipment to address possible events (e.g. spill kits) (H).							

Area	STRATEGY	Ongoing or specific task	13	14	15	16	17	Comment
	11. Test all soils for hydrocarbon content after bioremediation area before being disposed of as backfill (H).							
7.3 Marine Impacts	1. Replace the loading chute delivery system with the Cleveland system to reduce dust emissions (H-KMS).							
	2. Maintain log recording incidents of equipment failure and incidents where pollution control equipment was not utilised during ship loading (H-KMS).							
	3. Implement dust monitoring as per the DER Licence (see Section 7.7) (H-KMS).							
	4. Maintain rate of ship loading at a maximum rate of 700 tonnes per hour per chute and when Cleveland system is installed review the maximum loading rate to achieve dust emission targets (H).							
	5. Review potential dust sources and investigate possible new equipment or upgrades to existing equipment, changes to procedure to minimise dust inputs to the marine environment (H).							
	6. Following installation of the new Cleveland loading chutes, assess strategies for cleaning and disposal of trapped or clogged material to avoid marine inputs (H).							
	7. Maintain cladding on conveyors and transfers, and dust suppression on the feeders, gates, conveyors and other equipment to ensure appropriate management of dust (H).							
	8. Investigate the use of real time monitoring (e.g. via cameras) of ship loading operation to monitor ship loading and dust emissions incidents and to use for developing new protocols and procedures (M).							
	9. Train ship loading personnel in incident reporting, and maintain register of incidents (M).							
	10. Extend diversionary curbing/bunds and incorporate spoon drains to reduce sediment transport alongside concrete beneath incline conveyor (H-KMS).							
	11. Upgrade drainage systems in liaison with the Shire to reduce minimise sediment transport and movement of spilled material on the marine environment (H).							
	12. Maintain current diversion drain system runoff into vegetation adjacent to the conveyor as approved by the Environmental Licence (M).							
	13. Investigate the opportunities for a joint research on Flying Fish Cove to establish long term monitoring of benthic communities to assess seasonal and long term variation (M).							
	14. Investigate the opportunities for a joint research to gain an increased understanding of variability in water quality, water mixing, currents and flushing in Flying Fish Cove (M).							
7.4 Landforms & Soils	1. Undertake mine site planning (i.e. an <i>Erosion Control Plan</i>) for all clearing operations to identify potential erosion potential and mitigation strategies in liaison with neighbouring land managers (where applicable) (H-KMS).							
	2. Implement mitigations strategies as appropriate to minimise erosion which may include; (H-KMS).							

Area	STRATEGY	Ongoing or specific task	13	14	15	16	17	Comment
	3. Control erosion resulting from water draining off hardstand and permanent infrastructure through;. (H-KMS) .							
	4. Monitor cleared areas, with review of runoff and erosion pattern, in accordance with erosion monitoring procedure, and identify and implement remedial works as required (M) .							
	5. Ensure field supervisor and minefield operators have an appropriate awareness of erosion mitigation techniques, processes and procedures through appropriate training, supervision and audit (M) .							
	6. Liaise with adjoining land owners/managers to CIP infrastructure sites in respect to management of drainage and minimisation of erosion (M) .							
7.5 Terrestrial Habitats and Vegetation	1. Provide appropriate information to Government to enable assessment and approval of clearing permits within reasonable timeframes (H-KMS).							
	2. Ensure clearing permits are obtained for all clearing undertaken by CIP (H-KMS).							
	3. Undertake appropriate site inspections, training, onsite briefings, and supervision to ensure the conditions of mine site operations are fully met (H-KMS).							
	4. Ensure appropriate pre-clearing survey and flagging is undertaken to identify areas to be cleared, boundaries of National Park and other areas to be protected (heritage and/or rainforest areas) (H-KMS).							
	5. Implement an appropriate onsite audit and reporting program for mine site operations to assess compliance with clearing conditions and boundary impacts to surrounding vegetation and habitats (H-KMS).							
	6. Identify any primary habitat within MCI-70/1 and ensure appropriate management of mining activities to protect these areas (H-KMS).							
	7. Conduct environmental awareness training for all minefield operators to ensure an understanding of CIP environmental obligations and job specific requirements (H-KMS).							
	8. Undertake rehabilitation for the Airport Salvage operation (MCI-70/10) in accordance with EMP (see Appendix III) (H-KMS).							
	9. Contribute the Conservation Levy for areas mined in MCI-70/1 & 70/10 (H).							
	10. Develop a relinquishment plan in consultation with relevant stakeholders taking into account Parks rehabilitation priorities, Crown Land Management Plan recommendations, and the Local Planning Strategy, and operational issues (H).							
	11. Inform the community in regard to agreed CIP obligations for rehabilitation, the conservation levy and areas for which CIP have not mined or have any responsibility for (M).							
7.6 Fauna & Flora	1. Comply with all conditions of clearing permits that relate to red crabs (H-KMS).							
	2. Schedule haulage, mining operations and road maintenance to minimize vehicle traffic on high risk roads during the migration periods including;							

Area	STRATEGY	Ongoing or specific task	13	14	15	16	17	Comment
7.6.1 Red Crabs	<ul style="list-style-type: none"> scheduling resource supply from areas closer to the processing plant to minimize mortality during migration; the use of alternative haulage routes during migration (determined by crab movements); reduce or cease haulage during heavy crab movements across mining routes; restrict haulage during peak migration times (generally early morning and late afternoon); and restrict use of the grader for road maintenance in areas of high or moderate crab densities during the migration (H-KMS). 							
	3. Assess red crab densities in proposed clearing areas and where very high densities occur consider options to minimise mortality through amending boundaries of the clearing envelope and/or clearing high density areas after red crabs leave burrows for migration to minimise mortality (H).							
	4. Incorporate red crab migration into mine planning to determine management methods and strategies (H).							
	5. Continue red crab management and awareness training of CIP staff including promoting awareness at toolbox meetings, production meetings and senior manager meetings and encouraging the sharing of vehicles to and from work and using red crab 'friendly' routes to minimize road mortality (H).							
	6. Close finance office road car park early morning and late afternoons during periods of dense crab activity (H).							
	7. Continue liaison and cooperation with Parks Australia regarding road closures, mine closures, alternative haulage routes, etc (H).							
	8. Monitor vehicle usage and red crab mortality during migration periods to assess effectiveness of vehicle restrictions (M).							
	9. Subject to capacity and resources, work with island partners to assist in the implementation of island-wide conservation and environmental management programs for red crabs where these are likely to result in tangible environmental benefits (M).							
	7.6.2 Robber Crabs	1. Remove Robber Crabs by trapping and relocation before areas are cleared for mining operations and comply with all related conditions of clearing permits (H-KMS).						
2. Minimise vehicle based mortality through employee education programs (H).								
3. Subject to capacity and resources, work with island partners to assist in the implementation of island-wide conservation and environmental management programs for robber crabs where these are likely to result in tangible environmental benefits (M).								
7.6.3 Birds	1. Assess potential impacts on Abbotts Booby and other threatened species in the clearing permit approval process to ensure no significant impacts on habitat or abundance as a result of clearing (H-KMS).							
	2. Comply with all conditions of clearing permits (H-KMS).							

Area	STRATEGY	Ongoing or specific task	13	14	15	16	17	Comment
	3. Subject to capacity and resources, work with island partners to assist in the implementation of island-wide conservation and environmental management programs for threatened bird species where these are likely to result in tangible environmental benefits (M) .							
7.6.4 Bats	1. Undertake pre-clearance surveys; (H-KMS) .							
	2. Fulfill Vegetation Clearance Protocol; (H-KMS) .							
	3. Implement Pipistrelle Alert Plan if required; (H-KMS) .							
7.6.5 Listed Flora	1. Undertake appropriate assessments in clearing permit approvals processes to ensure no threatened flora species are located within proposed mining areas (H-KMS).							
	2. Should threatened species be located, CIP will contact DER & Parks to determine appropriate measures to protect the populations located (H).							
	3. Undertake appropriate assessments of areas proposed for clearing to assess potential presence of other special flora species and assess management measures to minimise impacts (H).							
7.7 Community Values	1. Maintain appropriate processes and mechanisms to receive and record public dust and noise complaints (H-KMS).							
	2. Investigate options to minimise the need for 'dust process bypass' (e.g. more storage) and improve the management and containment of dust where this activity occurs (H-KMS).							
	3. Replace loading chutes with the "Cleveland" system to reduce dust emissions during ship loading (H-KMS).							
	4. Undertake a quarterly system of inspections and audit of all major operational areas and action any requirements for improvements where significant dust emissions are identified (H).							
	5. Inform managers and supervisors of issues and incidents relating to sub-standard dust management and ensure an appropriate management response (H).							
	6. Undertake a review of equipment replacement and upgrade to minimise dust emissions with a focus on ship loading, downhill, and transfer stations (H).							
	7. Be vigilant with housekeeping around all sites and clean up spillage as soon as practicable to reduce potential for dust re-suspension (H).							
	8. Review ship loading protocols to ensure compliance with licence conditions (H).							
	9. Utilise the water truck or other dust suppression treatments to suppress dust within the LB4 stockpile area and haul roads (M).							
	10. Investigate alternative methods for minimising dust generated from haul roads (L).							

Area	STRATEGY	Ongoing or specific task	13	14	15	16	17	Comment
	11. Monitor dust emissions during ship loading using portable equipment at one of seven selected and approved sites (H-KMS).							
	12. Establish permanent dust monitoring equipment (TEOM's) as soon as practical at the wharf and SITA to provide 24/7 monitoring (i.e. replacement of portable monitoring approach) (H-KMS).							
	13. Check baghouse performance at least twice weekly through pressure drop testing, and replace failed bags (H-KMS).							
	14. Report monitoring results and incident/compliant reporting as per the requirements of the Licence for Prescribed Premises (H-KMS).							
	15. No dust bagging operation between 11 pm and 6 am (H).							
	16. Minimise machinery noise (e.g. conveyors) through appropriate maintenance of equipment and undertake corrective maintenance immediately public complaints are received (H).							
7.8 Heritage	1. Maintain a register of heritage sites on CPI lease areas (H-KMS) .							
	2. Ensure the presence and significance of heritage sites are considered before any clearing or major works to remove existing structures (H-KMS) .							
	3. Where possible contribute to the conservation and management of industrial heritage on Christmas Island (M) .							
	4. Provide training and awareness of heritage management to CIP employees (M) .							
	5. Monitor the status of priority heritage items on an annual basis (L) .							
	6. Consistent with available resources, undertake heritage management strategies in accordance to recommendations outlined in the Godden Mackay Report, 1997 (L) .							
	7. Promote the industrial heritage of Christmas Island in collaboration with major stakeholders and the Australian Heritage Council (L) .							
8.1 Weeds & Pests	1. Undertake weed control on a prioritised basis based on meeting regulatory requirements, minimising the establishment of new populations of weeds into 'clean' areas, and protecting important habitat communities from priority weed species (H-KMS).							
	2. Maintain a record of identified weed species and locations on the mining lease (H).							
	3. Undertake annual monitoring of priority weed locations (H).							
	4. Review the existing Weed Management Plan and reassess CIP priorities (M).							
	5. Ensure vehicles are cleaned regularly (e.g. high-pressure hose at designated washdown bays) to avoid movement and spread of weed species through transfer of soil and plant material (H).							
	6. Contain wastewater from vehicle washdown bays and treat to prevent transmitting weeds (H).							

Area	STRATEGY	Ongoing or specific task	13	14	15	16	17	Comment
	7. Audit compliance with washdown procedures on a quarterly basis (H).							
	8. Work collaboratively with Island partners to address weed management of priority Island wide introduced fauna species (M).							
	9. Work collaboratively with Island partners to address pest species management of priority Island wide weed species (M).							
	10.							
	11. Provide training and awareness programs for the workforce on weed and pest identification, reporting and management (M).							
8.2 Waste Management	1. Continue to comply with appropriate standards, licences and legislation in respect to the disposal of waste products (H-KMS).							
	2. Undertake processes to monitor waste (by category) to enable annual auditing of overall wastes produced (H).							
	3. Investigate options for practical and appropriate disposal of paint products (H).							
	4. Investigate potential waste minimisation strategies such as moving to products that generate less waste, or waste that can be readily recycled (M).							
	5. Work collaboratively with other waste producers (e.g. Commonwealth, shire and private contractors) to jointly address waste management methods and potential ways of increasing recycling opportunities (M).							
	6. Maintain and where possible increase the reuse of waste products for mine operations (M).							
	7. Develop long term options for the disposal of the significantly increased quantities of materials generated in the future mine decommissioning stage (M).							
8.3 Energy Consumption	1. Monitor and record energy use for each operational area (H-KMS).							
	2. Undertake reporting on site wide fuel consumption and emissions for the NPI, with reporting as per NPI guidelines for Mining and for Fossil Fuel Electric Power Generation (H-KMS).							
	3. Consider potential energy efficiencies in key areas of consumption through changes in equipment and efficiencies in operations (H).							
	4. Review options for operational efficiency and set targets for energy reductions for individual work areas (H).							
	5. Develop a site-wide policy that requires new acquisitions of plant to take into account energy efficiency/usage as a factor in choosing between alternatives (H).							
	6. Investigate alternative energy options (e.g. solar, wind etc) to reduce fossil fuel use and electricity consumption (M).							
	7. Investigate equipment upgrades to reduce energy use (M).							