



CHRISTMAS ISLAND
PHOSPHATES

ML177 Clearing Permit Referral Supporting Documentation

November 2023

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1.0 Introduction to PRL/ CIP Activities on Christmas Island

Phosphate Resources Limited (PRL) was granted Mining Lease MCI 70/1A in 1997; and in 2013 the lease was extended until 2034. PRL operates phosphate mining, processing, and shipping operations from Christmas Island under the trading name Christmas Island Phosphates (CIP).

Mining Lease MCI 70/1A occupies approximately 1636 hectares. During its tenure, CIP have conducted vegetation clearing for exploration and mining purposes within the mine lease boundaries.

Christmas Island is an Indian Ocean Territory of Australia, located approximately 2 300km northwest of Perth. Christmas Island covers 135km², of which close to two thirds of the island is declared National Park. The boundaries of the National Park and the original mining lease were determined from aerial photography.

Mining on Christmas Island has been carried out since the late 1800s, and it remains a large contributor to the island's economy. The areas currently under mine lease have all been previously cleared; and under mine lease conditions no primary rainforest can be cleared for mining operations.

The Christmas Island National Park covers over 60% of the island; to date approximately 25% of the island's original vegetation has been cleared including for the Australian Border Force facility Northwest Point Detention Centre, other infrastructure for the Commonwealth and residents of Christmas Island, and mining activities.

2.0 Proposed Clearing Areas

The area being applied for under this application is a previously mined site, which is now a mostly flat site, growing predominantly grassy weeds with some small weed species saplings, over soft pinnacle. The clearing is required to enable the construction of a stockpile area nominated as ML177STP23g. This area sits adjacent to clearing permit CPS 4506 but is not included in it as it was previously part of CPS 2132 (expired November 2022); the area CIP are proposing to clear covers approximately 0.79ha.

See section 4.0 for site specific details of the area proposed for clearing, and the Figures at the end of the document for photographs and visual details of the site.

3.0 Christmas Island

3.1 Climate

Christmas Island is tropical, being located at latitude 10°30'S and longitude 105°40'E; and has a tropical monsoonal climate with distinct wet and dry seasons and little seasonal variation in temperature. The dry season (May - November) is dominated by low and sporadic rainfall events with consistent south-east trade winds. The wet season generally occurs from December – April with the island receiving most of its rainfall during this period.

Temperatures remain relatively uniform throughout the year; the island has high humidity throughout the year with frequent dews and heavy mists during the wet season.

3.2 Geology and Soils

Christmas Island is one of a series of seamounts that rise above the 5 500m 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 occasional outcrops.

A series of geological uplifts and successive layering of coral reefs over the basalt core of the island have led to the eruption of new cliffs and terraces from the ocean, forming stepped terraces and inland cliffs. Limestone is mixed with dolomite sediments, basalts, and tuff deposits. Phosphate rich soil covers the limestone over approximately half of the island.

3.3 Landforms and Topography

The island is characterised by sea cliffs that rise via a series of terraces to a central plateau. The shoreline is dominated by cliffs with a few small beaches. The island's natural landscape is dominated by karstic surface landforms and cave systems.

3.4 Hydrology

A major feature of the island 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.

Christmas Island 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 have some risk of erosion and sedimentation carriage.

Permanent surface water habitats on Christmas Island are limited to a number of spring fed streams found along coastal or sloping areas of the island. Hosnie Springs and The Dales are both listed as a Wetland of International Importance under the Convention on Wetlands of International Importance, Water Fowl Habitat 1971 (RAMSAR Convention), and are listed in the Directory of Important Wetlands in Australia.

3.5 Flora and Fauna

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

Christmas Island is home to many unique species of birds, both forest and sea, reptiles and crustaceans. Over 20 species of terrestrial and intertidal crabs have been recorded on Christmas Island. At the time the Christmas Island Biodiversity Conservation Plan 2014 – 2024 (draft) was written in 2014, four species of vascular plants and 22 terrestrial fauna species had been identified as significant on Christmas Island.

This includes three sea birds which nest on Christmas Island, seven forest birds, three mammals (although one of these species the *Pipistrellus murrayi* (Christmas Island pipistrelle bat) has been declared extinct, and another, the *Crocidura trichura* (Christmas Island shrew) is considered extinct under the EPBC Act, as of 2023). Six species of reptiles (including the *Emoia nativitatis* forest skink declared extinct in 2021) and three land crabs make up the rest of the 22 species.

Further to those species listed above, other species recorded on the EPBC Act Profile and Threats Database (as of November 2023) includes the remaining Christmas Island native mammal *Pteropus melanotus natalis* (Christmas Island flying-fox), two of the reptile species *Cryptoblepharus egeriae* (Christmas Island Blue-tailed skink) and *Lepidodactylus listeri* (Christmas Island gecko/ Listers gecko), both considered extinct in the wild but subject to an intense captive breeding program) are considered critically endangered.

Endangered species include *Cryptodactylus sadleiri* (Christmas Island Giant gecko), *Accipiter hiogaster natalis* (Christmas Island Goshawk), *Chalocophaps indica natalis* (Christmas Island Emerald dove), *Fregata andrewsi* (Christmas Island Frigatebird), *Papasula abbotti* (Abbott's Booby), *Phaethon lepturus fulvus* (Christmas Island White Tailed tropicbird and Golden bosunbird), and the *Turdus poliocephalus erythropleurus* (Christmas Island thrush). Christmas Island fauna categorised Vulnerable includes *Rampotyphlops exoxoeti* (Christmas Island Blind snake), and *Ninox natalis* (Christmas Island Hawk-owl).

Flora species listed on the databases includes the endemic *Asplenium listeri* (Christmas Island Spleenwort) and *Pneumatopteris truncata* (a large fern), both listed as critically endangered, and *Tectaria devexa* (a cave fern) which is listed as endangered.

4.0 Site Specific Information

4.1 Proposed Stockpile ML177 STP23

The referral application covers proposed site ML177 STP23G, which is inside of the tenement lease but outside of a current clearing permit. We would like to clear and level to use as a stockpile/heavy machinery parking bay. The proposed stockpile site is located within the expired clearing permit CPS 2132, as shown in Figure 1, and is adjacent to an area covered by CPS 4506 and nearby active site covered by CPS 3472.

The site we are requesting to use for stockpiling contains low quality weed vegetation which consists of weedy grasses, and small introduced shrubs comprising the weed species *Muntingia calabura*. There are also small clusters of *Nephrolepis biserrata* within the area proposed for clearing. The windrow closest to the road and the steeply cut face to the east of the proposed site will not be cleared/ levelled.

The proposed site will be used for stockpile of material from the neighbouring active stockpile site 116MCP STP23A (under CPS 3472) and for safe parking of heavy machinery.

No flora or fauna species identified as significant to Christmas Island is likely to be found in the area proposed for clearing. The land area itself is not identified as significant, nor is it adjacent to any significant areas on Christmas Island. There are no hydrology/ hydrogeology features in this area. The nearest areas of primary rainforest will not be impacted by the proposed clearing works. As the proposed site contains low quality vegetation and has previously been mined, CIP are proposing to use this site rather than to clear alternative sites that are within a current CPS.

For further details regarding the proposed site of this clearing, please refer to the figures below, and the word document showing the location of the site within the mine lease area..

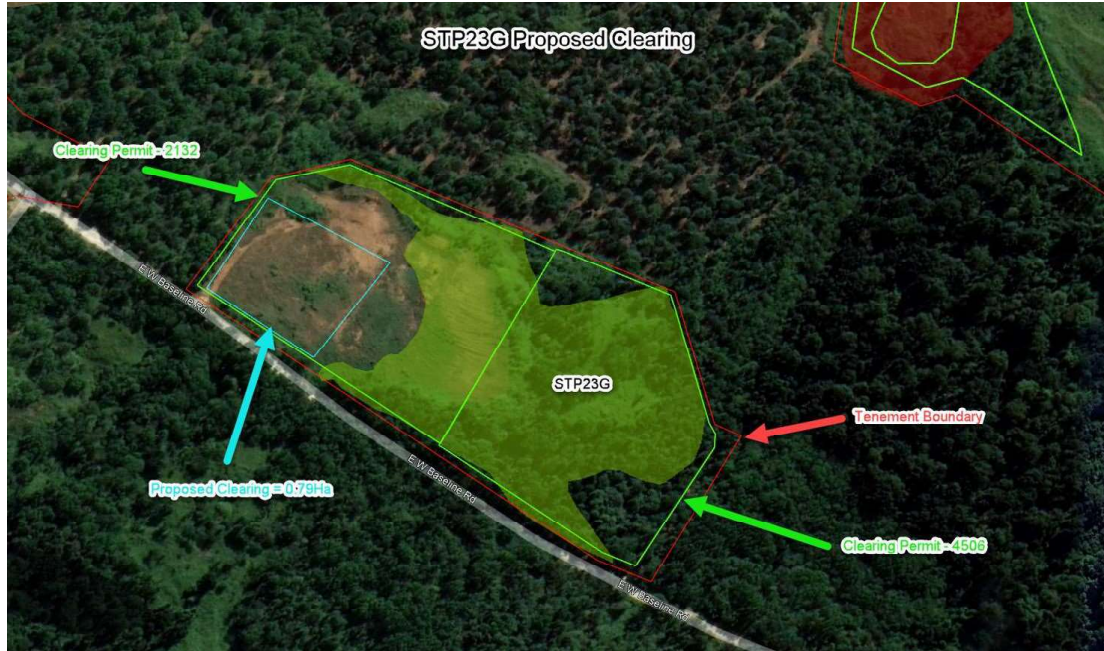


Figure 1 Proposed location for clearing on East West Baseline Road

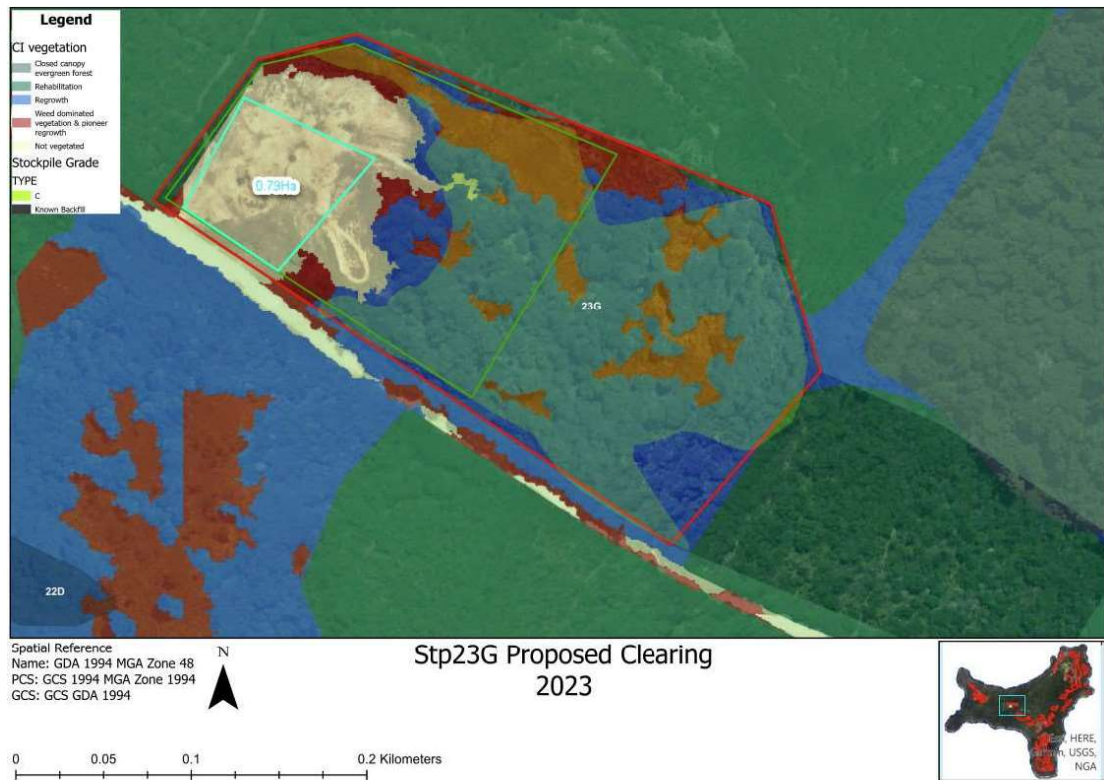


Figure 2 ML177Stp23G Vegetation Map - 2023



Figure 3 Looking towards East West Baseline Road facing south - east



Figure 4 Immature Muntingia calabura sapling in the area to be cleared



Figure 5 Area to be cleared looking towards the east



Figure 6 Site towards East West Baseline showing roadway vegetation windrow buffer