Proposed Nature Conservation Areas for ML 6024, 7024, 7031

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This paper describes a range of proposed nature conservation areas for the above leases. They have been proposed to ensure the sustainability of biodiversity values during and after the process of bauxite mining.

The figure below illustrates the range of conservation values that have been identified across the lease areas. These are described in more detail in the *Review of the Adequacy of Conservation Management Zones* (Wannan 2013) an internal paper for DEHP. The values include:

- Threatened regional ecosystems
- Regional ecosystems with nil or low representation in protected areas
- Sub-regionally endemic regional ecosystems
- Wetlands of national significance
- Fish habitat areas
- Rainforest and spring refugia
- Threatened plants and animals
- Corridors

The figure below shows the broad occurrence of these values across the three leases.

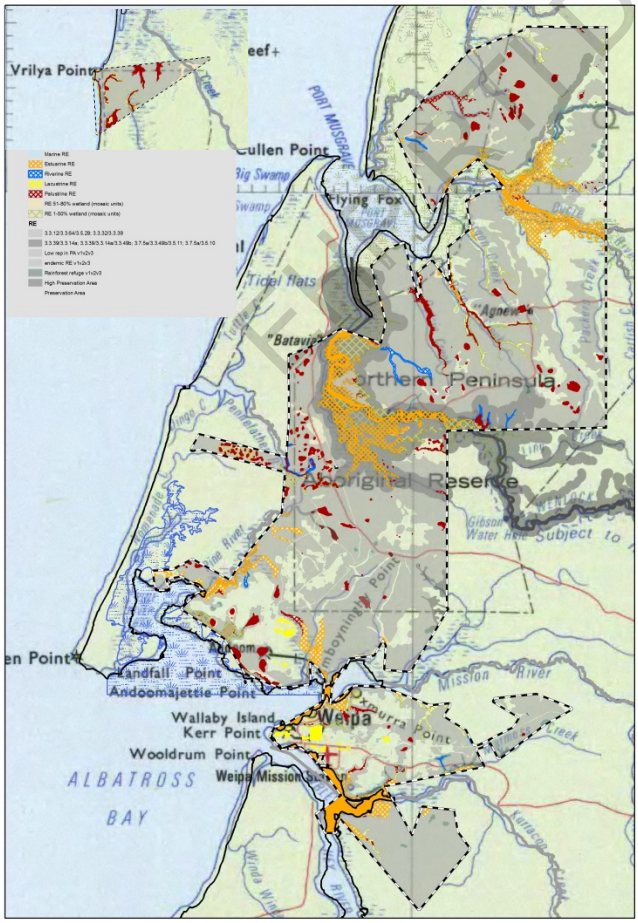

Figure 1 – Occurrence of conservation values across ML 6024, ML 7024, ML 7031

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The figure below illustrates the nine Nature Conservation Areas (NCA) that are proposed in order to provide sustained protection for biodiversity across the landscape.

Figure 2 – Proposed Nature Conservation Areas

The values contained within these nine areas are outlined in the table below.

The 9 areas vary in size from 3,244 ha (North Mission River) up to 39,436 (Port Musgrave catchment). They total 110,943 ha which is 38% of the total lease areas. Many are clearly associated with the main riparian networks of the lease area as these are the key habitats within the landscape due to their diversity and species richness.

It is proposed that these Nature Conservation Areas would be protected from disturbance associated with mining activities. They will also provide key habitat sinks for the return of biodiversity to areas being rehabilitated after mining.

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Conservation values across proposed Nature Conservation Areas

Area	Threat. REs	Nil /low representation of RE in protected areas	Endemic REs	Wetlands of National Significance	Rainforest (refuge)	Spring refugia (also BPA state significant)	Corridor (ex BPA)	Threat species	BPA assessment of significance	BPA area decisions & significance	Cape York Peninsula Land Use Strategy area	Area (ha)
Vrilya Point	Yes	Yes	No	Yes	Yes	Yes	Yes regional	Yes (E,V,NT)	state/ regional	endemic BVG - state	Vrilya wilderness area	8190.02
Skardon River	No	Yes	No	Yes	No	Yes	Yes regional	Yes (E,V,NT)	state/ regional/ local		Port Musgrave area	3288.15
Port Musgrave catchment	No	Yes	No	Yes	Yes	Yes	Yes regional	Yes (E,V,NT)	state/ regional/ local	est. crocodile habitat - state	Port Musgrave area	39436.00
Wenlock River Corridor	Yes	Yes	Yes	Yes	Yes	Yes	Yes state	Yes (E,V,NT)	state	endemic BVG - state, fish habitat - state, est. crocodile habitat - state	Port Musgrave area 100%	29500.93
Pine River catchment	Yes	Yes	Yes	No	Yes		Yes regional	Yes (E,V,NT)	state/ regional/ local	est. crocodile habitat - state	Pennefather Duyfken	5914.58
Pennefather Plain	No	Yes	No	No	No	Yes	Yes regional	Yes (E,V,NT)	state/ regional/ local		Pennefather Duyfken 100%	3629.24
North Mission River	No	Yes	Yes	No	Yes	Yes	No	Yes (E,V,NT)	state/ local	endemic BVG - state	Mission River area	3244.99
Marmoss Ck	Yes	Yes	Yes	No	Yes	Yes	No	Yes (E,V,NT)	state/ regional/ local			4463.63
East of Hey River	Yes	Yes	Yes	No	Yes	Yes	No	Yes (E,V,NT)	state/ local	endemic BVG - state, est. crocodile habitat - state	Hey Embley Rivers Area 100%	13275.68

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Impact on resource areas

The total area of the three leases is 290,433 ha with an identified resource area (*CMP 5mB Provmine normal*) of 140,963 ha (49%).

The proposed conservation areas provide a modest range of additional protection for biodiversity across the three leases. They mostly do not overlap the identified resource areas. Only 39% of the proposed conservations areas (43,033 ha) overlap with proposed mining areas (*CMP 5mB Provmine normal* areas).

The proposed Nature Conservation Areas would reduce the currently proposed mining areas by only 14%. This important additional protection of biodiversity represents a low impact on the proposed mining resource

Impact on biodiversity

The proposed Nature Conservation Areas will provide protection and representation for a broad range of conservation values described above. In particular, they are designed to provide protection for those threated species known to inhabit the riparian and associated woodland communities such as Red goshawk, Northern Quoll, Fawn leaf-nosed bat, Yakka skink, Masked open woodland, Greater large-eared Horseshoe bat, Semons leaf-nose bat. They will also provide protection for other species which occur in these communities as well as rainforest and wetland communities that are represented in these areas.

The proposed Nature Conservation Areas also provide representation for a range of regional ecosystems that are poorly represented in existing protected areas especially the Regional Ecosystem 3.5.2 which is the dominant community where bauxite is mined. Although small areas of Regional Ecosystem 3.5.2 are mapped in Oyala Thumotang National Park these examples occupy drier areas and do not attain the statue of the examples around Weipa. It is likely that the faunal components of these forests also differ. The areas proposed for protection in the East of Hey River include spring fed wetlands and rainforest communities. This area would protect the mosaic of these plateau communities and their associated ecosystems down to the Embley River estuary.

The proposed Nature Conservation Areas (Port Musgrave, Wenlock River Corridor) also provide some additional protection for the aquatic values of Port Musgrave which provides key habitat for a range of marine species including Dwarf sawfish, Green sawfish, Freshwater sawfish, Flatback turtle and Olive Ridley turtle. The proposed Pennefather Conservation area provides additional protection for the wetland complex of the Pennefather Plain which is an extraordinary area Tertiary landform with a dense mosaic of lenses into the groundwater.

The proposed Marmoss Creek Conservation Area provides additional protection for the spring fed wetlands of this area and recently confirmed rediscovery of Northern Quolls. It provides a rich representation of the margin of a well developed bauxite plateau and associated features.

The proposed Pine River Conservation Area provides some additional protection for the main drainage catchment of the Pine River Bay Fish Habitat Area.

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