CESSATION REPORT ON MLN 188, 189, 190, 239, 240, 241, 242, 243, 244, 245 & 246

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1.0 Location

The Darwin Quarry property is situated on Thorngate Road, Palmerston and is approximately 24 kilometres from Darwin. The suburb of Palmerston is located 3km to the south of the quarry, with Robertson and Whaler Barracks to the immediate west of Thorngate Road. The land is held under mineral leases by CSR Ltd and CSR Readymix (Aust) Pty Ltd, and operated as CSR Readymix Quarries.

Access to the locality is from the bituminised Thorngate Road which runs northerly from Tulagi Road, Yarrawonga Road and the Stuart Highway.

2.0 Site History

Several companies originally leased the land from the landowners for the explicit purpose of providing raw material resources. Australian Blue Metal (ABM) leased Section 93 from Mr ADG Ross in 1969 and Interconstruction leased Sections 102, 105 and 126 from Mr A Albany in the early 1960's. Darwin Crushed Metal (DCM) was then formed to operate the northern quarries as a result of the amalgamation of Intercontinental and Humes in 1972. On June 14 1973 the Commonwealth of Australia compulsory acquired the freehold land owned by Mr Ross and Mr Albany to provide the orderly development and expansion of Darwin (32 Square Mile Acquisition Area).

Between 1973 and 1978, both DCM and ABM mining leases were held in abeyance, but were still allowed to operate their quarries, while compensation and legal battles were fought by the original landowners. In 1978 with self government by the Northern Territory, the Commonwealth land was transferred to the NT Govt as Crown Land and the quarry lands became subject of mining lease agreements between the NT Minister of Lands and the companies.

Darwin Crushed Metal (DCM, originally Intercontinental) acquired rights to mine and crush quartzite at their DCM quarry on Mineral Leases ML's 252B, 253B, 254B, 261B, from Mr Albany in the early 1960's. These DCM leases were renewed as ML's 188 -190 and ML's 239 - 246 in 1972 but were only granted in 1977 due to the Commonwealth acquisition delays. DCM was acquired by CSR Readymix in 1989 and title to their leases was finally transferred to CSR Readymix (Aust) Pty Ltd in 1995.

In 1998 all of the MCN's were consolidated into EMLN 88, 89 and 90.

3.0 Site Drainage

Drainage from most of the property flows into Milners Creek which bisects the property and runs northerly and north-easterly into Milners Swamp and Kings Creek. The eastern section of the property drains into Kings Creek which forms the eastern boundary of the property. Milners and Kings Creeks overflow during the wet season which can cut access roads and flood quarry workings. Groundwater is generally shallow throughout the property, ranging from less than a metre deep during the wet season, falling to between 5 and 10 metres deep late in the dry season. The salinity of the groundwater has not been measured but is expected to be relatively fresh.

4.0 Land Use

Commercial use of the land is for the purpose of extractive industries, with the remaining land a buffer zone which surrounds the extractive sites. The buffer zone contains future extractive reserves and sites for overburden dumps and will partly diminish as quarry development expands.

The importance of the property as a close source of construction material for the expansion of Darwin was recognised by the Darwin Rural Plan, 1983, resulting in the property being zoned Extractive Industry.

The land has been converted to Extractive Mineral Leases which are still current and still being mined. CSR is now carrying out detailed investigations to determine the full extent of further rock deposits in the immediate area.

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5.0  Mining Details

During the tenure of the leases, extensive mining has been carried out. A series of pits have been excavated at selected locations, and haul roads have been constructed to access them. The attached aerial photograph shows the locations of the pits and haul roads. The photo was taken on the 28/02/1998 and the lease boundaries have been overlaid onto it. Details of the excavations are given in Table 1.

<table>
<thead>
<tr>
<th>Pit Number</th>
<th>Average Depth (m)</th>
<th>Volume Extracted (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pit 6</td>
<td>7</td>
<td>35,000</td>
</tr>
<tr>
<td>Pit 7</td>
<td>30</td>
<td>1,800,000</td>
</tr>
<tr>
<td>Pit 8</td>
<td>10</td>
<td>15,000</td>
</tr>
<tr>
<td>Pit 9</td>
<td>10</td>
<td>100,000</td>
</tr>
<tr>
<td>Pit 10</td>
<td>12</td>
<td>320,000</td>
</tr>
<tr>
<td>Pit 16</td>
<td>10</td>
<td>110,000</td>
</tr>
</tbody>
</table>

Extraction at Darwin Quarry has been by the drill and blast method. Topsoil and overburden has been removed by bulldozer and stockpiled. Quarry faces were then drilled by percussion drill, explosives placed in the blastholes and the blast detonated. The blasted material was loaded by front end loader and hauled by 35 tonne dump trucks to the nearby crushing plant and processed.

6.0  Infrastructure

Some small sheds are located on MLN 190 and MLN 243. This area was once the location of the crushing plant and weighbridge, and an extensive area was cleared (approximately 12 hectares) for stockpiles etc. There are also some waste stockpiles and concrete panels still present. This will be removed as the area is progressively rehabilitated.

7.0  Rehabilitation

Rehabilitation will be carried out during the remaining tenure of the leases and will work towards an acceptable end use for the site. The Department of Defence has expressed interest in the area for a training area, and negotiations are ongoing.

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