To: Mining and Industry Projects
Department of Planning
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21st December 2012

RE: Calga Quarry Project (Rocla Sand Mine Proposal)
Reference 06_0278

I wish to OBJECT to the Calga Sand Mine Proposal.

The amended plan for proposed State 4 and State 5 extraction areas would reduce:

- the total area of proposed disturbance from 48 to 41.2 hectares, and
- the total sand resource to be extracted from 16.7 to 13.2 million tonnes.

However, this reduction would still allow over 80% of the original proposed disturbance and over 75% of the proposed sand extraction to proceed. The proposal remains a major sand extraction project that would have a significant impact on the natural environment.

The reasons for objection relate to the potential for adverse impacts on environment and health from the proposed expansion of the Calga sand mine. Notably, this proposal has the potential for significant hydrological and ecological changes and potentially harmful health effects from air-borne silica dust particles.

Key issues of concern relating to environmental impacts, include:

- The proposed mine is expected to use a significant volume of spring water per year. This would put adverse pressure on the freshwater aquifer with the potential to cause:
    1. A severe decreased in hydrostatic pressure in the groundwater,
    2. Limited potential for any recharge of the groundwater, approximately 1% of the estimated usage per year would be replenished during operational mining activities,
    3. Loss of groundwater dependent ecosytems, including hanging swamps
    4. Loss of freshwater flows and saline intrusion of the lower riverine systems including Mooney Mooney Creek, Mangrove Creek and Ourimbah Creek

- The clearing of vegetation and wetland habitats has the potential for adverse effects on various threatened and endangered species, including animals: Red crowned toadlet, Glossy black cockatoo, Spotted tail quoll, New Holland mouse, Rosenberg's monitor, Eastern pygmy possum, Powerful owl, Gang-gang cockatoo, Grey-headed flying fox, Giant burrowing frog; plants: *Darwynia glaucophylla* and *Hibbertia procumbens*; and habitats: Hanging swamps. The project has the potential to reduce the long-term viability of a number of threatened species present on the Project Site of, in particular on the population of Red-crowned Toadlet.

- The proposed project would results in a significant loss of Hollow-bearing Trees for roosting bats and arboreal mammals.

- Groundwater dependent ecosystems, namely, hanging sandstone swamp habitats present on the proposed site are extremely rare and endangered, and protected under state legislation. These unique groundwater dependent ecosystems support many important flora and fauna including endangered species such as the Red Crowned Toadlet. The proposed mine expansion would cut into the rock up to a depth of 35 metres. This will destroy areas of swamp and has the potential to severely impair the groundwater aquifer. The loss of vegetation and surface runoff would reduce the groundwater recharge to approximately 1% of its current levels. In the original report, Part 3 of the Environmental Impact Assessment (Ecological Assessment) states that *"Hydrological changes due to proposed extraction activities at the Project Site may result in some impacts on riparian vegetation and nearby downstream groundwater-dependent species."*

- It is estimated that the aquifer supplies up to 50% of the water supply to Mooney Mooney Creek, Mangrove Creek and Ourimbah Creek. The proposed extraction would cut into the fractured sandstone structure of the aquifer and has the potential to create an irreversible drain on one of the main catchments supply water for the Central Coast. The Environmental Impact Assessment (Ecological Assessment) notes the potential for "*…impacts of the Project, particularly those associated with a reduction in water flows are likely to be permanent and irreversible."*

- Given the nature and importance of the surface and groundwater flows, and those threatened and endangered species and habitats which are dependent on them, the precautionary principle should be applied to this proposal. Research by the federal government on sustainable water yield levels should be included in an assessment, on a project that could have the potential to significantly alter the aquifer and affect the central coast's water supply.

- I also express my concern for the health of the community living close to the mine. The production of sand from sandstone (by Crushing) is associated with the creation of silica dust (under 10 microns) which is known to cause asthma and with chronic exposure can cause the deadly disease silicosis as well as various cancers.

The above issues are crucial to the long-term viability of the terrestrial and aquatic habitats and the flora and fauna which they support within the Calga and Peats Ridge environment. Sand can be extracted from other sources, but the environmental values of this area are special and should be protected for future generations.

Yours sincerely,

Ann Sharp

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