

## **REDHOUSE CHELSEA ARTERIAL: POSSIBLE BLASTING OF THE ROCKY OUTCROP**

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In order not to environmentally damage the adjacent or surrounding rocky outcrops, when excavating outcrops within the road reserve, the following methods shall be used:

### **1. EXCAVATION BY MACHINERY**

When the volume of rock to be excavated is not large, machinery such as the “Montybird” or similar rock breaker shall be used. These machines break-up the rock progressively in limited volumes and no disturbance to the surrounding rock strata takes place. This process will be used wherever economically possible.

### **2. EXCAVATION BY BLASTING**

Where the volumes of rock are considerable then blasting may have to be resorted to.

In order not to damage to adjacent rocky outcrops wherever this occurs, the following procedures will in essence be followed:

- Cover blasting will be undertaken by covering the blast area with an layer of sand of appropriate thickness to absorb shock.
- Control blasting with delayed action between the setting off of charges.
- Limited number of charges set-off simultaneously.
- Charge limited to approximately 400gm of explosive per cubic metre rock.
- Monitoring the blast by means of ground vibration instruments and adjusting next sequence of blasts if necessary.

The blasting techniques described above, typically enable blasting to be undertaken to within 4m of existing buildings without damage. Similarly the adjacent rocky outcrops will not be affected. Nearly all of the energy of the blast is absorbed into the shattering of the rock the sand cover and very little shock is transmitted to the surrounding area.

The proposed blasting methods (if blasting is required) will therefore ensure the ecological, integrity of the adjacent rocky outcrops.