

## 5 MINE AREA SITE PREPARATION

### 5.1 Vegetation Clearance

The area for the Portal Terrace, WRD, Watut Process Plant and TSF are currently heavily forested and an extensive vegetation clearance program will be required to enable construction of these facilities. Economically-valuable trees will be cut and transported to a central log storage area for later sale or use by local landowners. When necessary, some timbers may be milled almost immediately to avoid deterioration. Seeds will be harvested from representative tree and shrub species for use in mine area site rehabilitation, and sufficient cleared vegetation (leaves and small branches) mulched to provide for bank stabilisation and rehabilitation. Non-commercial timber (branches and immature trees) will be made available to local communities for cooking fuel and building materials.

Due to the large footprint of the TSF, a considerable excess of cleared vegetation is expected, some of which may have to be burned. Other disposal options will be explored and, given the implications for local air quality and greenhouse gas emissions, burning will only be used as a last resort.

### 5.2 Portal High Wall and Terrace

Due to the steep terrain in the area of the planned decline portals, the Portal Terrace will be built on the side of the Boganchong Creek valley to form a marshalling area for the underground activities.

The high wall will form a geotechnically-stable, steeply-angled face from which to commence construction of the entrances to the declines (the portals). The portals are located between 230mASL and 250mASL.

The high wall will necessitate the excavation of approximately 300,000 cubic metres (m<sup>3</sup>) of material, which will be used for construction of the Portal Terrace and Portal Access Road. Excavated material will be exclusively Babuaf Conglomerate. This rock type is Non-Acid Forming (NAF) and will be placed above a buried stormwater drainage culvert within the Portal Terrace.

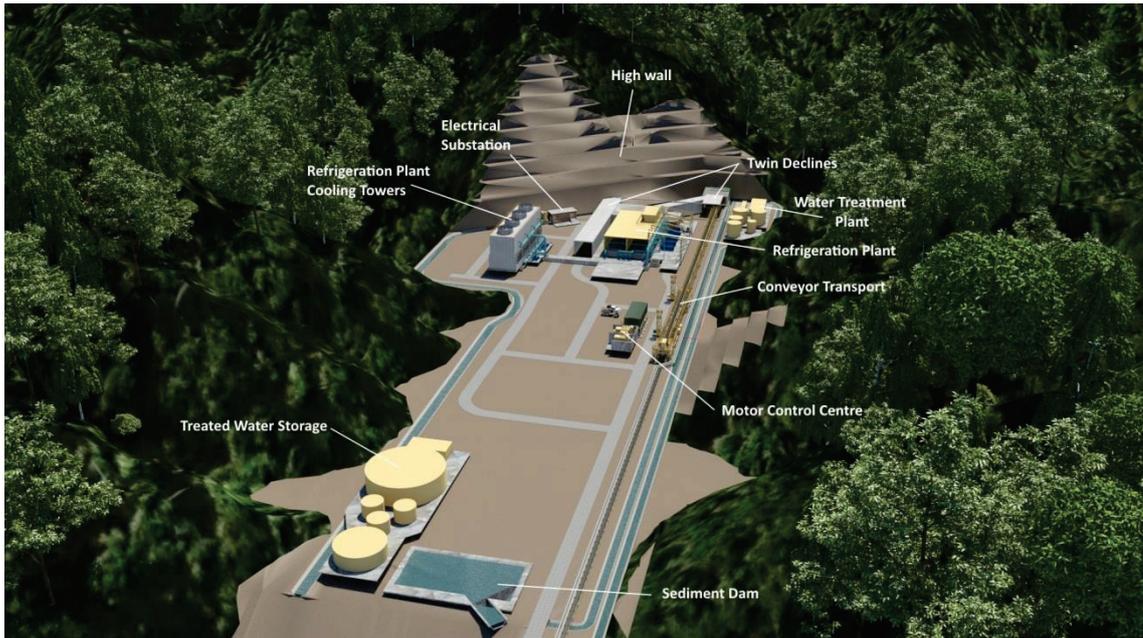
Weep drains of varying lengths will be installed across the face of the high wall to de-pressurise the slope. Soil nails, mesh, and fibre-reinforced shotcrete will also be applied as erosion protection and to support and stabilise the wall.

The Portal Terrace will be on fill material bounded by the valley walls as shown in Figure 5.1. The facilities located on this terrace are listed in Table 3.1. The Portal Terrace will be utilised beyond Approved Activities phase to support EIS Activities, with additional facilities such as conveyor transfer stations installed during the EIS Activities phase.

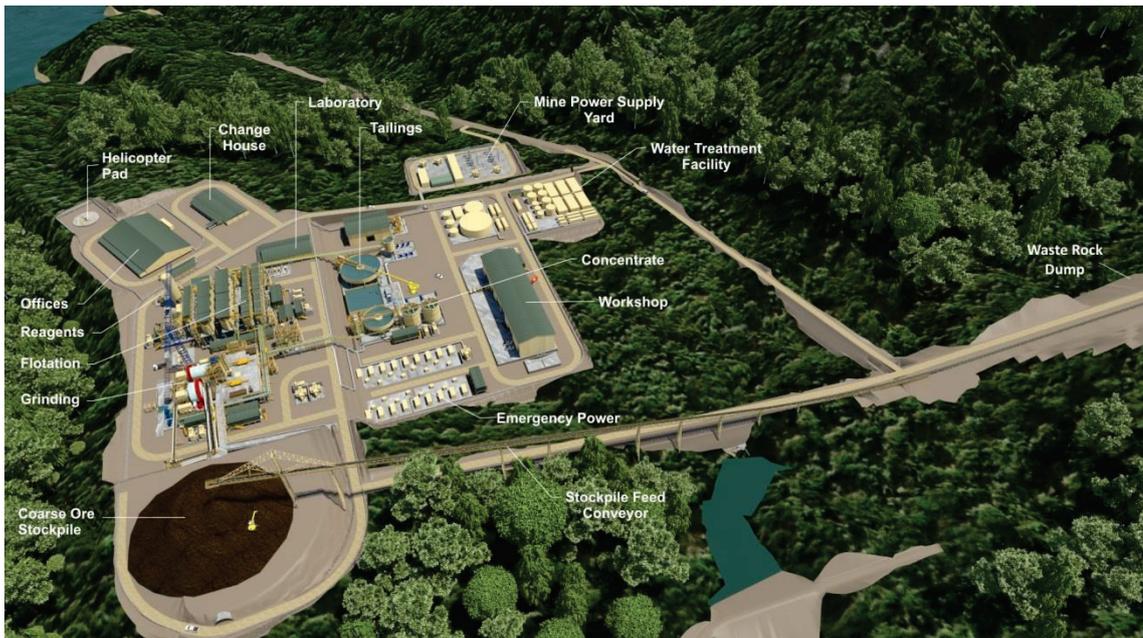
### 5.3 Watut Process Plant Terrace

The Watut Process Plant Terrace will be constructed as a precursor to the mining phase. Its location is shown in Figure 1.1 and Figure 2.1 and a general arrangement of the Plant Terrace is shown in Figure 5.2.

The Plant Terrace will be constructed on a ridge line and requires a combination of cut and fill to achieve the necessary area to host the Watut Process Plant. The facilities located on this terrace are listed in Table 3.2. Stormwater management is relatively simple due to the ridge-top location.



**Figure 5.1: Portal Terrace general arrangement**



**Figure 5.2: Plant Terrace and associated infrastructure**

The Plant Terrace will be made up of three platforms, with a 10m to 12m step between each platform. The stepped platforms provide energy efficiency as gravity will assist the movement of the ore during processing from the ore stockpiled on the highest platform to the concentrate and tailings emerging on the lowest platform.

A helicopter landing pad will be constructed at the northwest end of the Plant Terrace close to the main administration building. An area located to the north of the Watut Process Plant's access road will be terraced for the incoming high voltage power supply yard. This area will be excavated with a minimal fill requirement. The Plant Terrace also hosts laboratories, warehouses, change rooms, raw and potable water storage and security.