

2.1 Overall Project Description

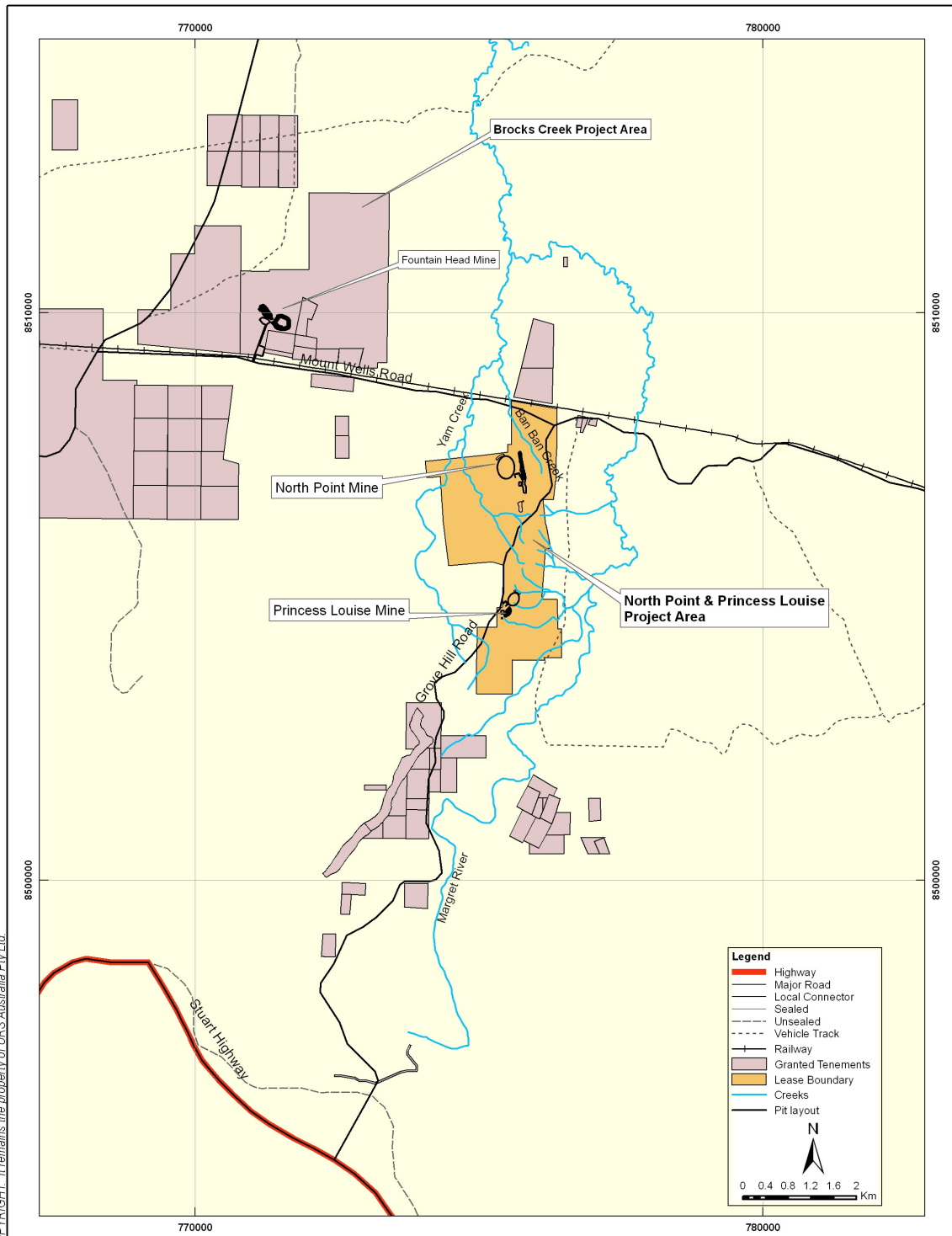
As described in Section 1.1, BOPL proposes to commence gold mining at the Princess Louise and North Point mine sites (Figure 2.1). Open cut pits will be developed to access the ore bodies at each site. Ore will be extracted at each open pit by blasting and excavation.

The excavated material will then be placed in temporary stockpiles before being loaded onto trucks and transported to URGM located approximately 53 km southeast of the project area (Figure 1.1). Waste rock (overburden) will be stored in a waste rock dump adjacent to the open pit. The proposed mining process is outlined in Table 2.1.


Table 2-1 Proposed mining process

Phase	Process Details
Vegetation Removal	Where practicable any vegetation that needs to be removed will be stockpiled to be used for rehabilitation purposes. As the mine sites are already largely disturbed, vegetation clearance will be minimal.
Removal and Stockpiling of Overburden	Waste rock will include both the overburden layer and the non mineralised material around the ore body. The waste rock dump design proposed to be used will be based on a 'store and release' type encapsulation system, and will be purpose-built to minimise any environmental impacts.
Mining	Extraction will be carried out using an excavator and a fleet of haul trucks. Blasting will be required to fracture the ore and waste rock sufficiently so as to allow for excavation. Mining at North Point and Princess Louise mine sites may operate concurrently, with blasting occurring at one site, while excavation takes place at the other.
Transport	Ore will be stockpiled temporarily on a run of mine (ROM) ore pad at each site before being loaded onto haul trucks and transported to URGM for processing. It is anticipated that approximately 181,256 m ³ of oxide ore will be transported to URGM.
Water Management	Both the North Point and Princess Louise prospects will be mined to below the water table. Groundwater extracted from the mine sites will be stored temporarily in water storage tanks and used for dust suppression, with the excess water at North Point directed into the nearby decommissioned Yam Creek open pit. Sediment dams will be constructed at North Point and Princess Louise to prevent surface water runoff from the mine site entering the surrounding creeks.
Rehabilitation	Following mining operations, the disturbed sites will be rehabilitated and returned to their previous land use (pastoral land).





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Client Burnside Operations Pty Ltd 	Project Princess Louise and North Point Project Area		Title Location of the Princess Louise and North Point Project Area mineral tenements, with local features and infrastructure	
	Drawn: BJ Job No.: 42213760	Approved: PB File No.: 42213760-2-1-PL-NP.mxd	Date: 5 Feb 07	Figure: 2.1



2.2 Ore Reserves and Mine Life

It is anticipated that the mine at Princess Louise will extend to approximately 35 m in depth and produce 113,000 tonnes of ore, and 361,000 t of waste rock. The North Point mine will extend to approximately 25 m in depth and produce 323,000 tonnes of ore, and 1,030,000 t of waste rock.

Anticipated gold production from the ore has been estimated at 1.56 g/t (5,660 oz pure gold) for Princess Louise and 1.87 g/t (19,470 oz pure gold) for North Point, but geological surveys and metallurgical tests are continuing, which may alter these estimates.

Both mines will be operational for less than one year, and it is anticipated that mining will be carried out simultaneously at both sites.

2.3 Site Preparation

Site preparation activities will be carried out by experienced earthmoving contractors. The major components of site preparation are listed below. It is noted that the site has been previously disturbed during extensive exploration activities:

- Construction of a contractor's laydown area;
- Construction of amenities, including a mobile site office, temporary waste storage area and mobile ablution facilities;
- Construction of a sediment dam at each site for retention of surface water;
- Construction of a storage tank at each site for the temporary storage of groundwater;
- Construction of a waste dump pad at each site;
- Widening of existing access roads and upgrading as necessary to make them suitable for haulage;
- Establishment of a temporary refuelling area;
- Establishment of a power generator area for the site office and lighting;
- Clearing of the open pit areas (these areas are largely already cleared); and
- Construction of a ROM pad at each site.

There will be no borrow requirements. Studies have shown that materials from the upper benches of the open pits will be suitable for all construction requirements.

All machinery and transportable buildings will be fabricated offsite, and then trucked to the project site as required.



2.4 Site Layout and Proposed Area of Disturbance

Conceptual site layouts are illustrated in Figure 2.2 and 2.3, for Princess Louise and North Point respectively.

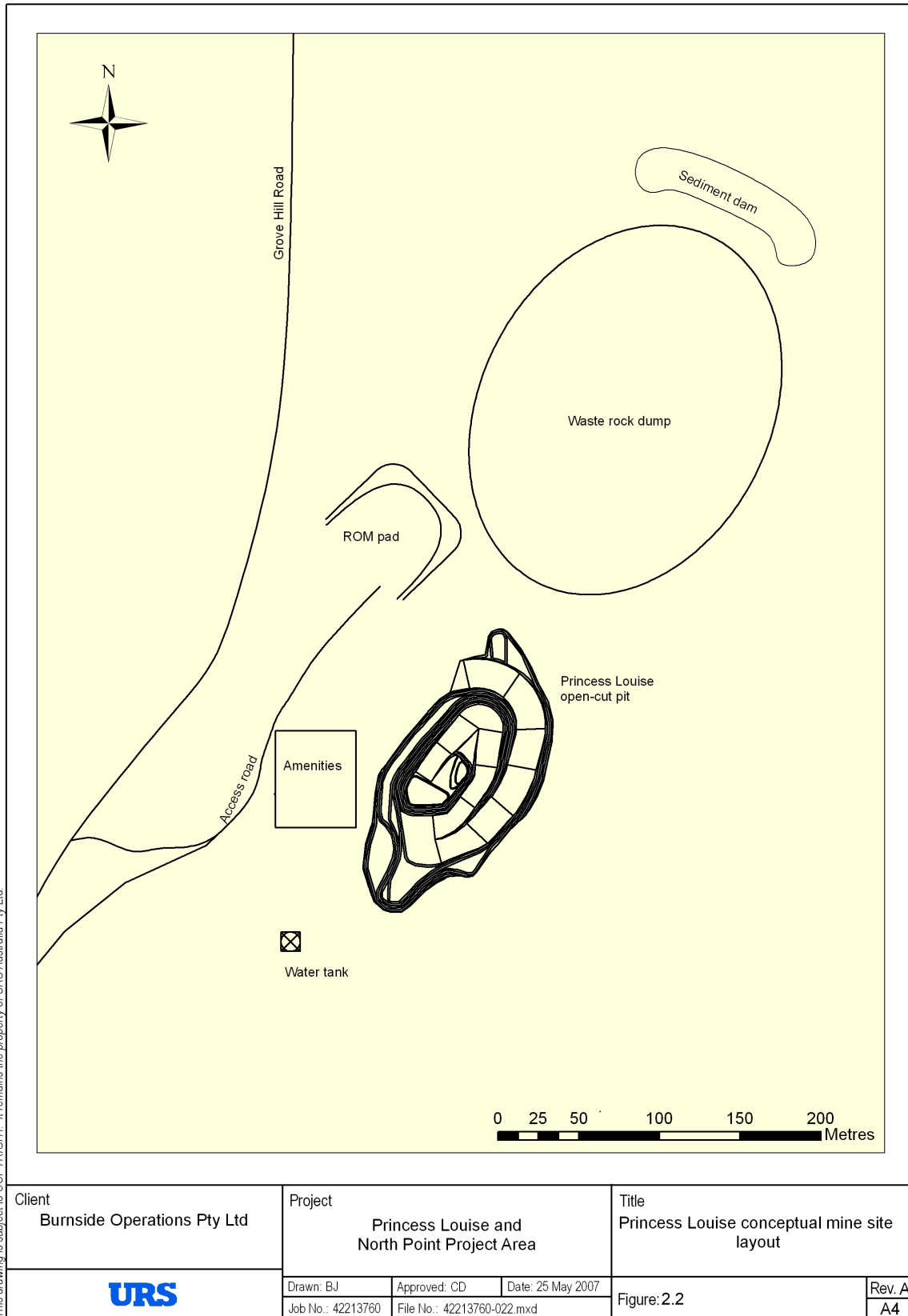
As stated earlier, the proposed mine sites have been heavily disturbed during previous exploration and mining activities, and a large portion (33%) of the native vegetation and topsoil has been cleared.

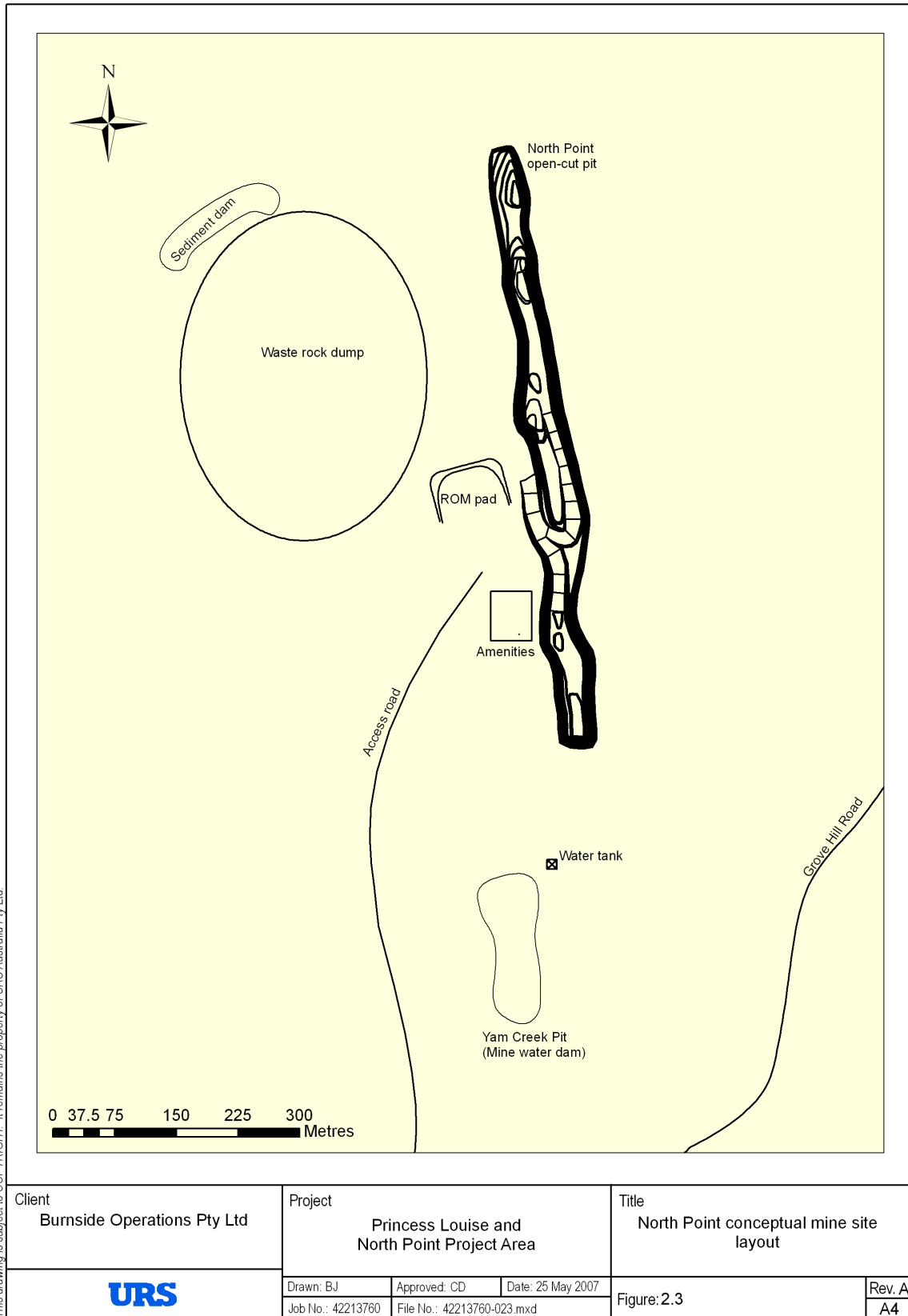
The proposed development footprints are approximately 6.7 ha at Princess Louise and 16.1 ha at North Point. The two proposed pits are located 2.5 km apart. In order to construct the open pits and associated infrastructure it is estimated that 3.3 ha of vegetation will need to be cleared at Princess Louise and 12.0 ha at North Point.

Much of the mine infrastructure will be temporary and includes:

- Portable site office and ablution facilities;
- Contractors' laydown area;
- Power supply – portable generator to be used for the site office and lighting of the area at night;
- Self contained lighting towers with their own power supply to light operational areas at night;
- Temporary storage areas for domestic-type and oily waste;
- Haulage and access roads.







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2.5 Mine Plan

2.5.1 Mining method

Both Princess Louise and North Point will be mined using conventional open-pit mining methods of drilling and blasting, and excavation using an excavator and dump trucks.

Drilling and blasting will be required to enable excavation of the waste and ore. Explosives will be brought in from Brocks Creek as required and will be mixed on site. No explosives will be stored on site.

Ore and waste rock material will be removed separately using an 85 t excavator, and 50 t dump trucks. Ore will be trucked to the ROM pad, where it will be tipped onto a ROM stockpile, and later loaded onto roads trains for transport to URGM. Waste rock will be trucked to the waste rock dump.

2.5.2 Mine life and project schedule

As described in Section 1.1, the schedule for mining the Princess Louise and North Point deposits will be dependent on the rate of mill feed delivered to URGM from other, larger mines in the region. At this stage BOPL propose to commence mining in October 2007, pending government approvals, but may defer the start date to 2008, or a later year.

The life of operations at both mines will be less than one year, and mining will be undertaken when roads conditions are suitable for haulage.

Mine rehabilitation works, including structurally stabilising the remaining landforms, and ripping and seeding for revegetation, will be complete by the second wet season after mining ceases.

Environmental monitoring will continue for as long as necessary following decommissioning (see Section 3). Decommissioning will occur when the site is rehabilitated to a level that is considered acceptable by DPIFM.

2.5.3 Pit design and parameters

The North Point pit will cover an area of 3.7 ha and will be mined to a depth of 35 m.

The Princess Louise pit will cover an area of 1.2 ha and be mined to a depth of 25 m.

The mining of each deposit will comprise the following sequence of operations:

- Haul roads will be constructed to facilitate access to the pits, ROM stockpiles and waste dumps;
- Benches will be developed by excavators operating in a backhoe configuration to load haul trucks;



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- Blasting will alternate between North Point and Princess Louise mine sites. Techniques will be adopted to minimise blast pressures and hence ground vibrations; and
 - In-pit ramps will be developed within each pit and between mining benches. The haul roads will be sheeted with competent, overburden rock.

2.5.4 Pit dewatering

Pit dewatering activities will be utilised to depressure pit walls and minimise the inflow of water into working areas. Dewatering will be undertaken via in-pit sumps or horizontal drain holes.

Required rates for pit dewatering are predicted to be 4.9 L/sec at Princess Louise and 24 L/sec at North Point (see Section 5). Mine water will be stored temporarily in storage tanks located next to each pit (see Figures 2.2 and 2.3), and be used for dust suppression in the pit, during waste rock placement, and on haul roads. Excess pit water from North Point mine site will be pumped into the decommissioned Yam Creek pit for storage.

Mining operations are planned for dry conditions, but in the event of occasional rainfall or of minor seepage from the groundwater into the pit, in-pit sumps will be used to remove water from the pit floor.

At mine closure, the pit voids will remain and pumping will cease, allowing the voids to fill with water.

2.5.5 Future extensions

The proposed action is a stand alone project, and not a stage or component of a larger mining project at the Princess Louise or North Point mine sites.

Exploration will continue at North Point and Princess Louise, and additional mining may be proposed should BOPL discover additional reserves nearby that could potentially be mined. Any additional mining will be the subject of a separate development application at that time.

2.5.6 Ore processing

No processing will be undertaken on site. Ore from North Point and Princess Louise will be transported to URGM for processing, which is approximately 53 km southeast of the project site (Figure 1.1).

2.5.7 Water use, source, storage and disposal

No process water will be needed at either the Princess Louise or North Point mine sites. Mine water from the dewatering systems will be collected in storage tanks and used for dust suppression around the mine and haul roads. The excess water from dewatering at North Point will be pumped into the nearby decommissioned Yam Creek mine open pit.



In the event of a rainfall event, mine surface water will be collected in sediment dams. Bunds will be designed and constructed as required around the rims of the pits, to prevent any surface water inflow into the pits during rainfall events.

2.6 Waste Rock and Stockpile Management

Waste rock from the Princess Louise and North Point pits will be placed in waste rock dumps adjacent to the open pit, as shown in Figures 2.2 and Figure 2.3.

Ore from both mines will be stockpiled on ROM pads adjacent to the two pits before transport to URGM, which is located approximately 53 km southeast of the project area.

Waste rock dumps will be constructed, operated and rehabilitated to ensure that the environmental impact is minimal during and after mining operations cease. Waste rock characterisation, acid generating potential and waste rock dump design is covered in Section 4.3 and 4.4.

During construction and operations, stormwater from the catchment area upstream of the waste rock dumps will be diverted to avoid contact with waste rock. Surface run off and seepage from the waste rock dumps will be directed to sediment ponds and monitored for quality prior to wet season release. If water treatment is required, this will occur at the sediment ponds. Treatment of surface water is discussed in further detail in Section 6.

The post mining land use for the rehabilitated waste rock dumps will be limited use and nature conservation, in consultation with relevant stakeholders. It is proposed that the surface of the waste rock dump will be revegetated with a mixture of native forest and grassland. The waste rock rehabilitation strategy is discussed in detail in Section 3.7.2.

2.7 Transport

BOPL intends to transport ore from the mine sites for treatment at the URGM processing plant, which is located 53 km southeast of the project area.

The preferred route for ore to be hauled will be by road train via the existing Grove Hill Road, Stuart Highway and Ping Que Road to URGM. Haulage from the mining sites to the URGM will occur over a 24 hour period during the operation, with a travel time of approximately 35 minutes between the mine sites and URGM.

During the project, personnel will commute to and from the mine sites daily from Cosmo Village, which is located approximately 23 km west of the project site. The route taken by personnel from the project area is expected to be via Grove Hill Road, Stuart Highway, Dorat Road and Douglas Road. Vehicles used for commuting between Cosmo Village and the mine sites will be cars and minibuses, with commuting occurring across a 24 hour period throughout the life of the mine.

Further information on transportation and haulage is included in Section 11.

