

### 13.1 Existing Conditions

As stated in the preceding chapter, the current population of the Tiwi Islands is concentrated in the three main communities of Nguiu (Bathurst Island), Pirlangimpi and Milikapiti (Melville Island). There are five outstations - Wurankuwu, Paru, Taracumbi, Yimpinari and Takamprimili (TLC 2004). The closest community to the project areas is Milikapiti, which is approximately 25 km and 40 km south-west of Andranangoo and Lethbridge respectively.

The proposed mining areas are connected to the port via a haul road from Port Melville to Pickertaramoor, which was constructed for forestry purposes. Under an agreement between Matilda and the TLC, the previous 4WD track between Pickertaramoor and Andranangoo has been upgraded to haul road standard to improve access during exploration. Prior to mining at Lethbridge, the existing 4WD track to Lethbridge will also be upgraded to haul road standard.

The thick vegetation and the sand dunes form a visual and physical barrier between the beach and the proposed mining operations at Andranangoo. Similarly thick vegetation comprising vines, shrubs, fallen logs and coastal regrowth forms a visual and physical barrier between the beach and the proposed mining operations at Lethbridge.

The existing noise conditions on the Islands include noise associated within urban living in the communities, noise associated with port activities at Port Melville, and pass-by noise associated with logging trucks in rural areas.

### 13.2 Objectives and standards

Currently there are no statutory regulations governing environmental noise emissions in the Northern Territory.

The major source of noise anticipated to be produced by the operations will be from power generation, vehicle and machinery operation, handling and loading of concentrate at the port, movement of mine equipment and haul trucks. All equipment used during mine operations and haulage will be fitted with efficient silencers, in accordance to the *Motor Vehicles Act 1949*.

As part of Matilda's Safety and Health policy, all efforts will be made to reduce the effects of noise on personnel, and a noise monitoring and management program will be implemented as required.

#### ***Relevant legislation, standards and policies***

The relevant legislation, standards and policy are:

- Matilda's Safety and Health Policy
- Matilda's Environment Policy

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- *Work Health Act 1986*
  - *Motor Vehicles Act 1949*
  - *Motor Vehicles (Standards) Regulations - Australian Vehicle Standards Rules*
  - AS 1055.1 1997 – Acoustics – Description and measurement of environmental noise – General procedures.

### 13.3 Definition of issues and impacts

Matilda anticipates that an increase in noise levels around the mining areas will be experienced, and local disturbance will occur over a temporary period (while the mine is operating) to some local wildlife through elevated noise levels.

Potential noise sources at the mine site include noise from the excavator, trucks, feeder and trommel, pumps, the processing plant and generator sets. The combined noise from these activities will cause an increase in noise levels in an area with a low noise background.

There will be five diesel-fired generator sets on site, comprising a 450 kW unit for the camp and processing plant; a 250 kW unit for the mining area trommel, slurry pumps and for lighting; two 40 kW generators for production bore water supply; and another 40 kW unit for the potable bore water supply.

Haulage of the concentrate from the mine sites to Port Melville will be a 24-hour operation, with four return trips anticipated every 24 hours. This haulage activity will result in an increase to the existing noise levels on the road between the port and the proposed mining operations.

The handling and loading of concentrate onto ships at the Port will also result in an increase in noise emissions. During ship loading, concentrate will be loaded into bins on trucks using a front-end-loader. The concentrate will then be emptied directly from the bins into the ship by gravity. Ore shipments would be in consignments of 4,000-8,000 t at a time, approximately every two months.

### 13.4 Management

Matilda has developed a Draft Dust and Noise Environmental Management Plan which is presented in Section 25.8.

As noted above, Matilda anticipates that an increase in noise levels to the local area will be experienced and local disturbance will occur over a temporary period (while the mine is operating) to some local wildlife through elevated noise levels. However, all efforts will be made to reduce levels where practicable.

All vehicles and machinery under the control of Matilda will be fitted with efficient silencers to reduce the amount of noise emitted. All cabins will be closed and air conditioned to reduce the effects of noise on employees. Employees will be allocated earmuffs or earplugs to further reduce the effects.

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Mining operations will be undertaken during the day shift only. The only equipment that will operate during the night will be the feeder, loader, trommel and pump in the mining area, and the processing plant, which is to be located on the escarpment. The processing plant uses centrifugal spirals for separating the heavy sand fraction, and is not an inherently noisy operation.

The five generators on site will be equipped with appropriate acoustic enclosure, in accordance with modern mining practice. The two larger generators will be away from the camp itself, and the three small bore water pumps will be well away from the camp.

As described in Section 11, the potential for noise to impact upon sea turtles is considered to be low. Noise will be mitigated through the maintenance of a 200 m buffer zone from the beach to the mining operations, and the undertaking of mining activities during day shift only. Staff and contractors will also be prohibited from using the beaches adjacent to the mining areas. Any noise generated by the plant or camp at night, will be further abated by the strong onshore winds that are experienced at night along the northern beaches of Melville Island (Guinea 2005b).

The haulage of concentrate will result in an increase to the existing noise levels on the road between the port and the proposed mining operations, and will be additional to the movement of logging trucks between Port Melville and Pickertaramoor. However, as noted in Section 2.5, it is proposed that the access to the mine sites will by-pass Pickertaramoor itself.

The handling and loading of concentrate at Port Melville will be controlled by PenSyl, and will be conducted under PenSyl's Management, Procedures and Guidelines. The proposed ship loading activities, which will occur approximately every two months, will involve concentrate being loaded into bins on trucks using a front-end-loader, and the concentrate being emptied directly from the bins into the ship by gravity. This is not a high noise activity. Overall the handling activities will be similar to other activities at the port, and it is not expected that Matilda's activities will have any significant impact on noise levels in the port area.

## 13.5 Commitments

*Matilda commits to providing a 200 m vegetative buffer zone from the beach areas to further reduce the effect of noise on nesting turtles (Section 13.2).*

*Matilda commits to reducing the noise emissions where possible (Section 13.4).*