



## Appendix Q

# Traffic Management Plan

**Vista Gold Australia Pty Ltd**

**Mount Todd Project Area**





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# 1. Introduction

## 1.1 Project context

The Mt Todd Project Area (MTPA) is located approximately 55 kilometres (km) northwest of Katherine and 250km south of Darwin. The area surrounding the MTPA is rural and sparsely populated. The Werenbun community is the closest residential community, located approximately 6.5 km from the MTPA along the Edith Falls Road. The Stuart Highway, the main arterial road in the region, is located west of the MTPA. Based on current known resources, the MTPA will have a mine life of 20 years inclusive of construction, operations and closure. Mine construction will occur over a two year period, and employing a workforce of up to 450. Mining and production is scheduled to operate for an additional 13 to 14 years and it is expected to employ a workforce of up to 400.

Transport associated with mine construction will include workforce transport to and from site by bus and light vehicle, and plant, equipment and construction materials transported to the site by a combination of standard and oversize heavy vehicles. Mine production is expected to occur over a further 13 to 14 year period. Transport associated with mine construction and operation will include:

- Transport to and from site, primarily by bus, of a workforce that will peak at 400;
- Fuel, oil, chemicals and consumables transported to site by heavy vehicle; and
- Transport from site of gold dore by armoured vehicle.

Closure and rehabilitation activities will occur over a four-year period. Vehicle usage during this time will be low and significantly less than that occurring during the construction and production phases.

### 1.1.1 Purpose and scope

This Plan forms part of the Environmental Management System (EMS) for the MTPA and is considered a working document. It has been following formal assessment by Department of Primary Industry and Resources (DPIR) as part of the mining authorisation process.

The purpose of this Traffic Management Plan is to establish the minimum health and safety requirements for vehicles, and design of roads and operating areas, to protect workers and other persons from harm.

This traffic management plan is relevant to all Vista Gold's workers, contractors and visitors and applies to all associated with the MTPA.

### 1.1.2 Policy Statement

Vista Gold is committed to fulfilling its obligations under the Work Health and Safety (National Uniform Legislation) Act 2011 (NT), Work Health, Safety (National Uniform Legislation) Regulations (NT), and protecting workers and other persons against harm from its operations.

## 1.2 Legislative Requirements

### 1.2.1 Control of Roads Act

The Control of Roads Act provides that, subject to the Planning Act and the Local Government Act, the control, care and management of all public roads in the Northern Territory vests with the Minister. This

Act outlines the process by which public roads can be opened and closed. Any public or gazetted roads that are required to be opened or closed because of construction or operation in the MTPA would be required to follow the provisions of the Act.

#### 1.2.2 Traffic Act

The objective of this Act is to regulate traffic, which includes provisions in relation to the erection and operation of traffic control devices. Traffic control devices refer to signals, signs or markings displayed for the purpose of regulating, warning or guiding traffic. Under the Act, consent from the applicable competent authority is required prior to the erection and operation of traffic control devices.

#### 1.2.3 Transport of Dangerous Goods by Road and Rail (National Uniform Legislation) Act. 2010

The object of this Act and associated regulations is to regulate the transport of dangerous goods on land in order to promote public safety and protect property and the environment, achieved within a nationally consistent context.

The provisions of this Regulation reflect, with minor modifications, the provisions of the Model Subordinate Law on the *Transport of Dangerous Goods by Road or Rail 2007* prepared by the National Transport Commission. The Regulation establishes a system of standards and licensing for the transport of dangerous goods by road and rail and applies the Australian Code for the Transport of Dangerous Goods by Road and Rail to such transport.

This Act makes provision for safety in the transport of dangerous goods by road and rail. Involvement in the transport of dangerous goods by road or rail includes, but is not limited to, being the consignee of dangerous goods, loading or unloading dangerous goods that have been transported or the importation or arrangement to import dangerous goods.

#### 1.2.4 Work Health and Safety (National Uniform Legislation) Act 2011

The Northern Territory *Work Health and Safety (National Uniform Legislation) Act 2011* commenced on 1 March 2012, and represents a movement by state and territory governments towards harmonising work health and safety legislation across Australia. Under the Act, approved codes of practice provide practical guidance to meeting legislative obligations.

#### 1.2.5 Code of practice

The *Northern Territory Code of Practice in Fatigue Management* is a voluntary code of practice for fatigue management for road transport with the objective to provide operators with a basic set of key principles to be applied.

Fatigue is a common problem in both short and long distance truck driving. This loss of alertness is accompanied by poor judgement, slower reactions to events, and decreased skill, such as in vehicle control. It affects the efficiency, effectiveness and safety of a driver's performance in carrying out the driving task.

#### ***Managing Driver Fatigue***

Vista Gold and/or its contractors will be required to have a driver fatigue management procedure developed for its drivers. This procedure shall be developed in accordance with Northern Territory Road Transport Fatigue Management Code of Practice. Drivers on long haul consignments will be encouraged to plan their trips to make use of safe stopping locations for resting.

### 1.2.6 Permits

If any construction works are required within the Northern Territory Government road reserves an application must be submitted to the Department of Infrastructure, Planning and Logistics (DIPL). This will apply to any required upgrades of intersections on the Stuart Highway and the intersection of Edith Falls Road and Jatbula Road. The application must be accompanied by a Traffic Management Plan and associated documents for approval.

Vehicles that operate within legal size and mass limits are permitted to travel without special permission on any road in the Northern Territory. For vehicles, which exceed these limits (including their load), special permits are required and pilot or escort vehicles may also be required. The permit would place limits on the roads that a vehicle can use, depending on its size and mass.

Vista Gold or its contractors will need to apply for a permit to use over-dimensional or over-mass vehicles prior to using them in either the construction or operational phases of the MTPA.

## 2. Existing environment

### 2.1 Existing Road Network

The MTPA is located approximately 55 km north-west of Katherine, and approximately 250 km south-east of Darwin in the Northern Territory. It is located approximately 10 km east of Stuart Highway, off Edith Falls Road. The mine site access is via Jatbula Road, a restricted mine access road.

The Stuart Highway is a national highway and is a Declared Road controlled by DIPL. The Stuart Highway will provide connections from the major population centres to the mine.

The single track Darwin to Adelaide railway line runs parallel to the Stuart Highway within the Project area. Interstate passenger services and container and bulk freight services operate between Darwin and Adelaide along the line. Six services a week operate from Darwin to Adelaide, with additional bulk train services operating between regional mine sites and the Port of Darwin. The Ghan passenger service also operates two return services per week.

#### 2.1.1 Haulage Routes

Some of the mine equipment and process plant materials and equipment will arrive via the Port of Darwin. From the Port, they would be transported to site via the Stuart Highway. Other materials and equipment will arrive from interstate via the Stuart Highway through Katherine.

During all phases of the mine, access to the mine site will be from Jatbula Road (Mine Access Road), via Edith Falls Road and Stuart Highway. Key origins and destinations for mine-associated traffic are anticipated to be Katherine to the south and the Darwin area to the north. Approximate distances along each road to be used for haulage are as follows:

- Darwin to Edith Falls Road via Stuart Highway – approximately 275 km;
- Katherine to Edith Falls Road via Stuart Highway – approximately 42 km; and
- Stuart Highway to Jatbula Road via Edith Falls Road – approximately 11 km.

#### 2.1.2 Stuart Highway

The Highway has a 130 km/h posted speed limit for most of its length, and is generally a two-lane, two-way road (**Figure 2-1 Two Lane Two Way Cross Section of Stuart Highway near Edith Falls Turn off**). In the vicinity of the intersection with Edith Falls Road, the Stuart Highway widens to a four-lane, two-way road, with 15 m wide median and with 3.5 m wide right-turn and left-turn lanes. The road reserve at this location has a width of approximately 36 m.

This dual carriageway section of Stuart Highway is approximately 3.25 km, extending about 750 m to the south of the intersection and about 2.5 km to the north of the intersection. The left-turn lane from the north into Edith Falls Road is approximately 180 m.

Sight distance along the Highway at the Edith Falls Road intersection is reduced to 850 m to the south, due to the horizontal curvature of the road; however this still exceeds the Austroads desirable minimum stopping sight distance value of 257 m for a 130 km/h road.

There is no lighting provided along the road near the Edith Falls Road intersection; however, guideposts provide delineation for night time driving.



Figure 2-1 Two Lane Two Way Cross Section of Stuart Highway near Edith Falls Turn off

### 2.1.3 Edith Falls Road

Edith Falls Road is a two-way, two-lane road (**Figure 2-2 Two Lane Two Way Cross Section of Edith Falls Road with Creek Crossing**) connecting the Stuart Highway with Edith Falls. It is a Declared Road controlled by DIPL. The road is utilised mainly by local residents and tourists, and intersects with Jatbula Road (Mine Access Road), which is the main access road into the mine site.

The road has a typical cross section width of 7 m (2 x 3.5 m lanes) and the shoulders are a mix of rocks, grass and crushed rock with a width between 2.0 m and 2.5 m. The posted speed limit along the road is 80 km/h.

Edith Falls Road is subject to flooding, and alternative measures may need to be considered for emergency site access during a flood event. There is no lighting provided along the road, although guideposts provide delineation for night-time driving.



Figure 2-2 Two Lane Two Way Cross Section of Edith Falls Road with Creek Crossing

#### 2.1.4 Jatbula Road (Mine Access Road)

Jatbula Road is a private access road and will provide the main point of access to the mine. Jatbula Road is a two-way road (**FIGURE 2-3 CROSS SECTION VIEW OF JATBULA ROAD**) with no line marking and a speed limit of 80 km/h. Seal widths along Jatbula Road vary from 7.5 m to 8 m and in most cases shoulder widths are less than 1 m due to embankments on the side of the road, or the presence of rocks and debris. Pavement conditions along Jatbula Road vary and sections of the road are considered to be very poor, particularly in the area 1.2 km north-west of Edith Falls Road.

Roadside signage in this vicinity indicates that Jatbula Road is also subject to flooding.



Figure 2-3 Cross Section view of Jatbula Road

#### 2.1.5 Internal Mine Roads

Jatbula Road (Mine Access Road) continues within the mine site as an internal road. Conditions along the internal mine roads vary, sections range between sealed and dirt roads. Most internal roads undergo various forms of maintenance as required, and Vista Gold is responsible for this.

##### **Dust Control**

The Stuart Hwy, Edith Falls and Jatbula Roads are bitumen sealed so will not require dust control measures. Periodic inspections of Jatbula Road will be undertaken to inspect for any mud tracking and if found a water truck will be used to wash down the road if required. Dust control will only be required on the unsealed road sections of the mine site and this will be managed by either a water truck, gravel sheeting or soil binding polymers.

## 2.2 Intersections

There are two major intersections and one train level crossing associated with the MTPA. On site there will be numerous intersections formed by the internal network of operational roads and tracks.

## 2.2.1 Stuart Highway / Edith Falls Road

The Stuart Highway/Edith Falls Road intersection is a Give Way sign controlled T-intersection, where Stuart Highway is the major movement. At the intersection, the Stuart Highway is a four-lane, two-way divided road (**FIGURE 2-4 DUAL CARRIAGEWAY CROSS SECTION OF STUART HIGHWAY / Edith Falls Intersection**) with a median width of 15 m.



Figure 2-4 Dual Carriageway Cross Section of Stuart Highway / Edith Falls Intersection

An Auxiliary Left Turn (AUL) treatment facilitates left turn movements for southbound vehicles turning left from the highway and a Channelised Right Turn (CHR) treatment facilitates right turn movements for northbound traffic.

The separation of turning traffic from the through lanes on both the northbound and southbound carriageways makes provision for the deceleration of turning vehicles. The width of the median of Stuart Highway allows for vehicles turning right from Edith Falls Road to perform a two-stage crossing of the intersection, i.e. waiting at the median after crossing the southbound carriageway before entering the northbound carriageway.

Sight distances are observed to be approximately 850 m in both directions on Stuart Highway (**FIGURE 2-5 North bound view of Sight Distance at Stuart Highway and Edith Falls Road Intersection** and **FIGURE 2-6 South bound view of Sight Distance at Stuart Highway and Edith Falls Road Intersection**). This is greater than the desirable minimum stopping sight distance value of 257 m for a 130km/h road, as per Table 5.4 of Austroads Guide to Road Design Part 3: Geometric Design.



Figure 2-5 North bound view of Sight Distance at Stuart Highway and Edith Falls Road Intersection



Figure 2-6 South bound view of Sight Distance at Stuart Highway and Edith Falls Road Intersection

Sight distance requirements are given in Austroads Guide to Road Design – Part 4A: Unsignalised and Signalised Intersections. The required distances on level grade assuming a reaction time of 2.5 seconds are:

- Stopping Sight Distance (SSD) – 300 m @ 130 kph for light vehicles (cars);
- Stopping Sight Distance (SSD) – 258 m @ 110 kph for trucks
- Safe Intersection Sight Distance (SISD) – 383 m;
- Approach Sight Distance (ASD – value for trucks has been used) – 275 m; and
- Minimum Gap Sight Distance (MGSD) – 305 m for a right turn (this is the maximum distance given in Austroads).

The available sight distance complies with the Austroads guidelines.

Considering that there will be an increase in heavy vehicle movement through this intersection, regular assessments of the road surface condition will be undertaken and if required, in consultation with DIPL the sections that require attention will be repaired. An agreement will need to be made regarding the maintenance requirements for the intersection.

#### 2.2.2 Edith Falls Road / Jatbula Road (Mine Access Road)

The Edith Falls Road / Jatbula Road (Mine Access Road) intersection is a Give Way sign controlled T-intersection, where Edith Falls Road is the major movement. A short Auxiliary Left Turn lane provides for left turn movements from Edith Falls Road into Jatbula Road (Mine Access Road) from the west (**FIGURE 2-7 West bound view of Sight Distance at Edith Falls Road and Jatbula Road intersection**) and a basic right-turn treatment on the major road (BAR) provides for right turns from a shared right-turn and through lane from the east. A rural basic left turn treatment on the minor road (BAL) treatment provides for left and right turn movements exiting Jatbula Road (Mine Access Road).

To the east (**FIGURE 2-6 South bound view of Sight Distance at Stuart Highway and Edith Falls Road Intersection**), sight distances are restricted to approximately 600 m due to the horizontal curvature of the road on Edith Falls Road. Looking to the west from Jatbula Road, sight distances are

restricted to approximately 70 m, limited by a dip in the road. This is less than the desirable minimum Safe Intersection Site Distance (SISD) value of 181 m. Because this does not fall within the SISD for this intersection, Vista Gold will consult with DIPL to seek an amendment to the speed limit for the east bound section of the intersection from 80 km/h to 40 km/h. There are existing warning signs on Edith Falls Road on the approach to the intersection to warn of the intersection.

There will be an increase in heavy vehicle movement through this intersection. Regular assessments will be undertaken of the road surface condition and if required, in consultation with DIPL the sections that require attention will be repaired. An agreement will need to be made regarding the maintenance requirements for the intersection.



Figure 2-7 West bound view of Sight Distance at Edith Falls Road and Jatbula Road intersection



Figure 2-8 East bound view of Sight Distance at Edith Falls Road and Jatbula Road Intersection

Edith Falls Road Level Crossing at-grade level crossing of the single track Adelaide - Darwin Railway line is located on Edith Falls Road approximately 280 m west of the Stuart Highway / Edith Falls Road intersection (**FIGURE 2-9 West view of Edith Falls Road Level Crossing. Stuart Highway Intersection in the background**). The crossing is controlled by flashing lights. The Ghan service passes through the area twice a week, one inbound and one outbound. There are six weekly general freight train services between Adelaide and Darwin.



Figure 2-9 West view of Edith Falls Road Level Crossing. Stuart Highway Intersection in the background

To ensure that the queue of traffic waiting for trains to cross the Edith Falls Road does not encroach on the Stuart Highway, all long loads will be scheduled to access the site after the site shift changes (1.5 hrs either side of morning shift change). This will assist in reducing the traffic demand on this section of road. No long loads should be on this road at night.

With the increase in traffic during the Life Of Mine it is expected that the existing level crossing will need to be upgraded to include active controls such as boom gates. This will need to be discussed with DIPL and the operator of the rail link (AustralAsia Railway Corporation).

## 2.3 Traffic Generation

The construction workforce is expected to peak at around 450 personnel. This workforce would be the responsibility of a construction contractor. The construction contractor will be expected to operate under its own traffic management plan, and NT Road Traffic Rules, during the construction phase when transporting its workforce to and from the mine site.

The mining workforce including operations, maintenance, engineering, geological and support personnel, is expected to peak at around 400 personnel.

### 2.3.1 Construction

Construction works will take place largely between 6 am to 6 pm, with construction workers working 12 hour shifts with rotating shift patterns based on 7 x 7 day roster. Traffic generated by the construction phase will include:

- The workforce will be transported by bus to and from Katherine on their FI/FO roster;
- Administration and management personnel on a standard 5 x 2 day roster will be transported daily on a number of 30-seat buses to and from Katherine to the site;
- Worksite contractors accessing the site across the workday;
- Some management staff will commute by light vehicle daily;

- Transport of construction machinery and equipment to site;
- Import and disposal of materials by trucks; and
- The removal of machinery post-construction.

The main construction and commissioning activities for the MTPA will extend over 24 months.

At peak construction approximately 100 heavy vehicles and up to 60 light vehicle trips are anticipated daily.

### 2.3.2 Mining

Mining operations will be 24 hour, split across two shifts (6:00 am - 6:00 pm and 6:00 pm – 6:00 am). Activities associated with the generation of traffic during the operation of the mine will include:

- Transport of mine personnel between accommodation and the mine site by 30-seat buses from various locations in Katherine (12 bus trips or six buses in each direction per shift); and
- Delivery of reagents, fuel and explosives (47 light vehicle trips and 47 heavy vehicle trips are expected per day) at the peak of mining.

### 2.3.3 Decommissioning and Closure

During this phase of the mine there will be a significant decline in vehicle movements to and from the site. Around 40 personnel would be required for the decommissioning and closure phase of the MTPA, and only one bus, and a small fleet of light vehicles will be required to transfer personnel to and from the MTPA daily.

in the early stages of closure there will be heavy vehicle movements similar to that of the commissioning phase, as machinery and infrastructure is decommissioned and removed from site. Heavy vehicle movements to and from the MTPA will then be gradually reduced as this phase progresses.

It is then expected to spike again, when the remaining infrastructure and machinery leaves the MTPA. Once rehabilitation work has been completed, monitoring work will be required that only light vehicles will access the site.

## 2.4 Principle mining Hazards Associated with Traffic Management

The following principle mining hazards will interact with the management of traffic on site.

- Road and other vehicle operating areas;
- Fire / Explosion;
- Ground or strata failure e.g. traffic control for unstable roads/ramp cracking/slip failures;
- Air quality or dust or other airborne contaminants e.g. traffic control during dust storms;
- HV & LV interaction;
- HV & LV interaction with personnel;
- Open Pit Voids;
- Wet muddy conditions;
- Poor visibility (fog, rain or smoke);
- Contact with Infrastructure;

- Contact with livestock; and
- Fatigue.

#### 2.4.1 Movement of Mobile Plant

The mine operator must manage risks to health and safety associated with the movement of mobile plant at the mine and must have regard for: the design, layout, construction and maintenance of all roads and other areas. The operator will take into consideration the following to ensure the safety of its employees:

- Interactions between mobile plant, especially between large and small mobile plant;
- Interactions between mobile plant and fixed plant or structures;
- Interactions between mobile plant and pedestrians (including the use of pre-movement warnings for mobile plant in mine workings);
- The operation of remotely controlled mobile plant; and
- The maintenance, testing and inspection of brakes, steering, lights and other safety features of the mobile plant.

## 2.5 Interaction with the public road network

In March 2017 a risk assessment workshop was held to review and update the Project risk assessment that was completed for the 2013 EIS. Two risk areas for Traffic and Transport were identified. (**TABLE 2-1 Identified Risk Areas from Risk Assessment Workshop**). This Traffic Management Plan identifies control measures to address those issues.

Table 2-1 Identified Risk Areas from Risk Assessment Workshop

Activity	Potential Environmental Impact	Residual Risk Level		
		Consequence	Likelihood	Risk
Increased personnel traffic to mine site.	Major single vehicle or vehicle to vehicle accident leading to a fatality.	Critical	Unlikely	High
	Major vehicle to pedestrian fatality.			
Increase in freight trucks on Edith Falls Road and Stuart Highway, including transport of dangerous goods.	Major single vehicle or vehicle to vehicle accident leading to a fatality.	Critical	Unlikely	High
	Major vehicle to pedestrian fatality.			
	Road surface degradation.			
	Spillage of dangerous goods and their release to the environment.			

Vista Gold in consultation with its workers and contractors, have identified the hazards and assessed the risks associated with traffic management on this site. The following criteria have been taken into consideration:

- Workers, contractors and visitors;
- Movement of vehicles and mobile plant;
- Site Design;
- Bodies of water;
- Refuelling stations;
- Information, instruction and training;
- Prior history of incidents related to vehicles and other operating areas; and

### 3. **Management Measures**

Vista Gold is committed to its Duty of Care to provide a safe work environment for its workers, contractors and visitors. **TABLE 3-1 Management Measures** below details the management measures set out to manage traffic and transport activities for this operation.



Table 3-1 Management Measures

ID	Management Measures	Timing	Responsibility
<b>Code of Conduct for Drivers</b>			
All drivers of light and/or heavy vehicles that have been engaged by Vista Gold must adhere to the following <i>Code of Conduct for Drivers</i> .			
TR1	The code of conduct forms part of the transport contractual arrangements entered into with Vista Gold. Vista Gold will carry out necessary measures to inform transport contractors, as well as audit for compliance to this code of conduct. This may be via various communication means such as driver inductions, training and toolbox talks.	At All Times	Everyone
TR2	Obey all the laws and regulations that apply to vehicles on public and private roads		
TR3	Operate in full compliance with this Traffic Management Plan		
TR4	Respect the rights of others, including drivers and pedestrians, to use and share the road space		
TR5	Maintain a safe following distance between vehicles		
TR6	Ensure that the vehicle is clean and in good mechanical condition		
TR7	Not travel in convoys unless under approved escorts		
TR8	Following the designated access routes		
TR9	Abide by all NT road rules and vehicle regulations		
TR10	Ensure high level of courtesy		
TR11	Turn off Flashing/rotating beacons when on public roads		
	Contractors that transport hazardous substances to the Mt Todd Gold MTPA as well as safety procedures in place and comply with all requirements listed below.		
<b>Workes, Contractors and Visitors</b>			
TR12	Wear a high visibility “vest or shirt” to enhance their visibility / location at all times whilst on or travelling to the MTPA	At All Times	Area Managers
TR13	Comply with all site traffic management policies and procedures, which include but not limited to, inductions, notices, site signage and directives from site management		



ID	Management Measures	Timing	Responsibility
TR14	Additionally, contractors and visitors shall report to the weighbridge and sign in using the site visitors and contractors register.		
<b>Vehicles and Mobile Plant</b>			
TR15	<p>All vehicles entering the MTPA for the delivery of products / equipment shall have as a minimum:</p> <ul style="list-style-type: none"> <li>• UHF two way radio capabilities;</li> <li>• Fire extinguisher;</li> <li>• A rotating orange flashing light operating at all times;</li> <li>• Be compliant with NT road rules; and</li> <li>• Maintained in a roadworthy condition.</li> </ul> <p><b>Note:</b> Contractor and visitors vehicles that do not comply shall be transported or escorted by a Vista Gold light vehicle.</p>	At All Times	
<b>Light Vehicles (Not Exceeding 4.5 t)</b>			
TR16	<p>Light vehicles owned, leased and operated by Vista Gold shall comply with the above, in addition to the following requirements:</p> <ul style="list-style-type: none"> <li>• Four wheel drive capacity;</li> <li>• Internal roll cage (if required by mine specifications);</li> <li>• Hi-vis reflective taping;</li> <li>• Clearly displayed identifying number</li> <li>• 3.2 m flag pole with attached orange flag;</li> <li>• Head lights, front and back indicator lights and additional brake lights on head boards;</li> <li>• Reversing beeper;</li> <li>• Rear vision mirrors;</li> <li>• A fire extinguisher;</li> <li>• First-aid kit;</li> <li>• Serviced as per manufactures instructions;</li> </ul>	At All Times	Area Managers



ID	Management Measures	Timing	Responsibility
	<ul style="list-style-type: none"> <li>• Compliant with NT road rules;</li> <li>• Maintained in a roadworthy condition; and</li> <li>• Safe operating procedures and emergency plans are located in the vehicle.</li> </ul> <p><b>Note:</b> Additional measures may also be identified, that may be required for the site and will be implemented, however to operate a light vehicle on site</p>		
<b>Operating Vehciles on site</b>			
TR17	All personnel driving a light vehicle on a Vista Gold site shall have a current valid driver's licence unless the Mine Manger deems it safe to dive on the private MTPA roads in line with current legislation.	At All Times	Area Managers
TR18	Vista Gold personnel and contractors are obligated to notify the Resident Mine Manager when their drivers licence has been suspended, cancelled or expired	At All Times	Area Managers
TR19	No Vista Gold personnel will drive any company vehicle on a public road when their drivers licence has been suspended.	At All Times	Area Managers
<b>Mobile Plant</b>			
TR20	<p>Mobile plant owned, leased and operated by Vista Gold shall comply with the following requirements:</p> <ul style="list-style-type: none"> <li>• Head lights, front and back indicator lights and brake lights;</li> <li>• Reversing beeper;</li> <li>• Rear vision mirrors;</li> <li>• Clearly displaid identifying number</li> <li>• A fire extinguisher;</li> <li>• First-aid kit;</li> <li>• Compliant with NT road rules if applicable;</li> <li>• Serviced as per manufactures instructions;</li> <li>• Safe operating procedures and emergency plans located in the mobile plant; and</li> <li>• ROP canopies fitted or built in.</li> </ul>	At All Times	Area Managers

ID	Management Measures	Timing	Responsibility
	<p><b>Note:</b> Additional measures may also be identified. They will be implemented if required (e.g. monitor and reversing camera, proximity and collision avoidance devices).</p>		
TR21	<p>All mobile plant shall use the following horn signals to alert other workers and vehicle operators of the vehicles intent to move from its position.</p> <ul style="list-style-type: none"> <li>• 1 horn blast and wait 5 seconds prior to starting the vehicle;</li> <li>• 2 horn blast and wait 5 seconds prior to driving forward; and</li> <li>• 3 horn blast and wait 5 seconds prior to reversing the vehicle.</li> </ul>	At All Times	Area Managers
TR22	Front-end loaders and haul trucks shall have a audible reversing siren installed.	At All Times	Area Managers
TR23	Front-end loaders, graders and bulldozers shall travel with their buckets, blades or rippers between 0.5 metres and one metre from the ground.	At All Times	Area Managers
TR24	Haul trucks shall travel around the MTPA with their body in a lowered position and with their headlights on at all times (day and night).	At All Times	Area Managers
TR25	<p>All operators shall prior to exiting mobile plant, ensure:</p> <ul style="list-style-type: none"> <li>• One row of tyres on wheeled mobile plant are placed in a V-Drain or against a safety berm (with tyres turned into the berm) or bump stop when at a go-line area;</li> <li>• Be fundamentally stable (on level ground) prior to applying parking brake when away from the go-line;</li> <li>• Front-end loaders, excavators, graders and bulldozers shall have their buckets, blades and attachments lowered to the ground; and</li> <li>• The ignition turned off.</li> </ul>	At All Times	Area Managers
<b>Road Trucks</b>			
TR26	<p>Road trucks that enter or are operated on the MTPA shall have the minimum requirements:</p> <ul style="list-style-type: none"> <li>• Head lights, front and back indicator lights and brake lights;</li> <li>• Tarping system that can be operated from the ground or within the cabin;</li> <li>• Reversing beepers;</li> </ul>	At All Times	Area Managers

ID	Management Measures	Timing	Responsibility
	<ul style="list-style-type: none"> <li>• Rear vision mirrors;</li> <li>• Clearly displayed identifying number</li> <li>• A fire extinguisher;</li> <li>• First-aid kit;</li> <li>• Compliant with NT road rules if applicable</li> <li>• Serviced as per manufacturer's instructions</li> <li>• Safe operating procedures and emergency plans located in the mobile plant.</li> </ul>		
TR27	<p>All operators shall park up and ensure that:</p> <ul style="list-style-type: none"> <li>• It is fundamentally stable (on level ground) prior to applying parking brake;</li> <li>• Placed in neutral and the ignition turned off;</li> <li>• Ensure that it is safe to exit vehicle; and</li> <li>• Place wheel chocks behind the rear wheels of the prime mover.</li> </ul>	At All Times	Area Managers
<b>Site Design</b>			
TR28	<p>Vista Gold operational areas shall be designed to ensure that while workers, contractors and visitors are operating vehicles or mobile plant on site, they are, so far as reasonably practicable, safe from risk to health and safety. Appendix A outlines the current road network and traffic management controls that have been in place. A road network has yet to be designed for the new infrastructure that will be built. This TMP will be updated to reflect new infrastructure and road network.</p>	At All Times	Area Managers
<b>Prevailing Weather and Environmental Conditions</b>			
TR29	<p>All drivers and operators of light vehicles, mobile plant and road trucks shall reduce speed by and drive to conditions during rain events.</p>	At All Times	Area Managers
TR30	<p>All roadways and mobile plant operating areas shall be inspected daily and more frequently during and after heavy rain events for any signs of cracking, sinking or slippage.</p>	At All Times	Area Managers
TR31	<p>All vehicles operations shall cease immediately when the vehicles steering, braking or accelerating operations become uncontrolled during rain events or when instructed by site supervision.</p>	At All Times	Area Managers

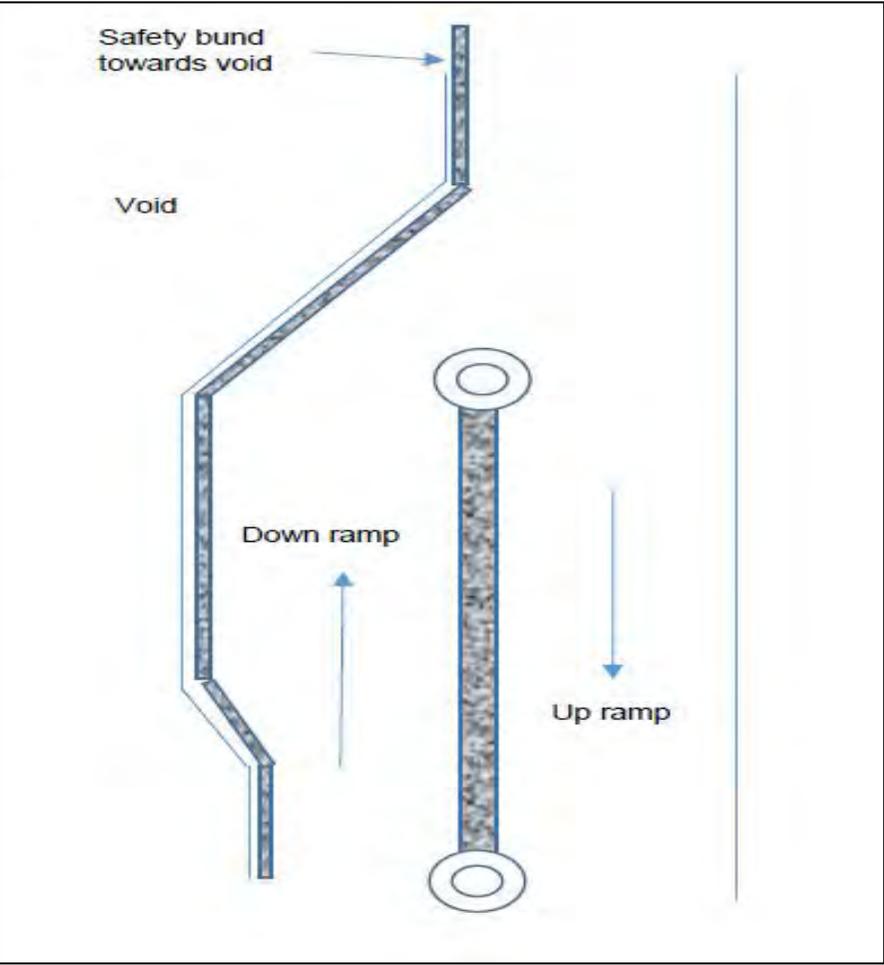
ID	Management Measures	Timing	Responsibility
TR32	<p>In addition to the above, light vehicles; mobile plant and road trucks shall also cease operations when the following occurs during rain events:</p> <ul style="list-style-type: none"> <li>• Poor visibility during rain events or dry weather;</li> <li>• Pooled water on roadways; and</li> <li>• Deep erosion on roadways and work surfaces, which could cause a driving hazard.</li> </ul> <p>The operator or drivers shall park the vehicle in safe area on level ground and contact site supervisor and wait for instructions.</p> <p><b>Note:</b> When cracking, sinking or slippage occurs on road surfaces, benches and levels, waste dumps and stockpiles the Resident Site Manager and site personnel shall be informed and the area shall be sectioned off and inspected by a geotechnical / mining / civil engineer.</p>	At All Times	Area Managers
<b>Buildings and Structures</b>			
TR33	All buildings and structures shall be positioned on site in such a manner that eliminates, where reasonably practicable, the risks to personnel who use the buildings or structures or potential damage to the buildings or structures from vehicles, mobile plant and environmental conditions.	At All Times	Area Managers
TR34	Where elimination of risk is not reasonably practicable, control measures shall be implemented to manage the risks. Distance barriers such as earthen mounds, guard railings concrete blocks shall protect buildings and structures;	At All Times	Area Managers
TR35	Suitable and adequate lighting shall be provided around buildings and structures to illuminate the immediate areas during night time operations and before sun rise or after sun set;	At All Times	Area Managers
TR36	Buildings and structures shall not be positioned next to embankments or edges of drop offs where there is a risk of personnel being injured or buildings and structures being damaged by collapsing / falling ground;	At All Times	Area Managers
TR37	Buildings and structures shall be positioned above flood plain levels and provided with adequate drainage in the event of heavy rains.	At All Times	Area Managers
TR38	Service areas for deliveries, pick-ups and maintenance shall be provided and clearly identified around buildings and structure.	At All Times	Area Managers
<b>Parking Areas (Carparks, Go-lines, Office and Workshops)</b>			
TR39	Car Parks:	At All Times	Area Managers

ID	Management Measures	Timing	Responsibility
	<ul style="list-style-type: none"> <li>All parking areas shall be adequately illuminated with artificial lighting to safely move about vehicles, parking and crossing areas when working hours dictate starting / finishing times are prior to daybreak or after sun set (insufficient natural light present).</li> <li>Ensure the surface areas are level and free from pot holes and pooled water;</li> <li>Ensure the surface is sheeted with suitable material to prevent muddy and slippery conditions forming;</li> <li>Be constructed with crushed gravel which will define the boundaries of the parking area;</li> <li>Have clearly defined parking areas (sun flower yellow line marking paint on concrete or bitumen) on semi-permanent hard stands</li> </ul> <p>Reverse parking for all light vehicles. All other vehicles park in the go line.</p> <ul style="list-style-type: none"> <li>Have 10 km/h speed limit signage clearly sign posted on entry and exit to parking areas;</li> <li>Have separate entry and exit point which are sign posted;</li> <li>Install blind spot bubble (convex) mirrors if exit points have blind spots; and</li> <li>Suitable signage to direct personnel to report to offices / building areas when they first arrive on site.</li> </ul>		
TR40	<p>Go Lines</p> <ul style="list-style-type: none"> <li>Ensure the surface areas are level and free from pot holes and pooled water;Ensure the surface is sheeted with suitable material to prevent muddy and slippery conditions forming;</li> <li>Be constructed with earthen mounds which will define the boundaries of the parking area;</li> <li>Have V Drains or bump stops installed for mobile plant to position themselves into or against to ensure they are fundamentally stable when parked and left unattended.</li> <li>Go line vehicles will park with front wheels into v-drains or bump stops</li> <li>Have 10 km/h speed limit signage clearly sign posted on entry to parking area;</li> <li>Have separate entry and exit point which are sign posted;</li> <li>Install blind spot bubble (convex) mirrors if exit points have blind spots; and</li> <li>Be of a suitable size to accommodate all mobile plant.</li> </ul>	At All Times	Area Managers
<b>Offices, Workshops and Fixed Plant Areas</b>			
TR41	Signage to identify parking locations	Construction	Are Managers

ID	Management Measures	Timing	Responsibility
TR42	Designated vehicle speeds of 10 km/h around offices, workshops and fixed plant structures		
TR43	Install blind spot bubble (convex) mirrors if exit points have blind spots		
TR44	Have clearly defined parking areas (sun flower yellow line marking paint on concrete or bitumen) on semi-permanent hard stands		
TR45	Clearly established walkways which are 600 mm wide and delineated and separated from road ways and thoroughfares		
TR46	Access doors to enter and exit buildings		
TR47	Signage stating “beware of forklift” on workshop buildings and confined spaces		
TR48	Signage stating “sound horn prior to entering or exiting” located on workshop / confined areas vehicle access openings		
<b>Pedestrian Crossings</b>			
TR49	Be sign posted to clearly identify where pedestrians must cross road ways;	At All Times	Area Managers
TR50	Be used in areas with high levels of anticipated pedestrian traffic;		
TR51	Have signage on road ways (20 m) prior to the crossing, to alert approaching drivers and operators; and		
TR52	Be sign posted with “give way” on the left hand side of the road where the crossing begins to alert the drivers and operators.		
TR53	Other options for delineating pedestrian access / high traffic areas that will be used are:		
TR54	Hi Vis Fluro Orange PVC Triangle on nylon rope and star pickets with caps.		
TR55	Orange Barrier Mesh Fencing and star pickets with caps.		
TR56	Hi Vis Orange Temporary Bollards and Bases.		
<b>Tarping Areas (Securing Loads)</b>			
TR57	All loads shall be tarped prior to leaving the MTPA if dust is likely to be excessive. A designated tarping area shall be provided for truck drivers to safely tarp (secure) their truck and trailer loads.	At All Times	Area Managers



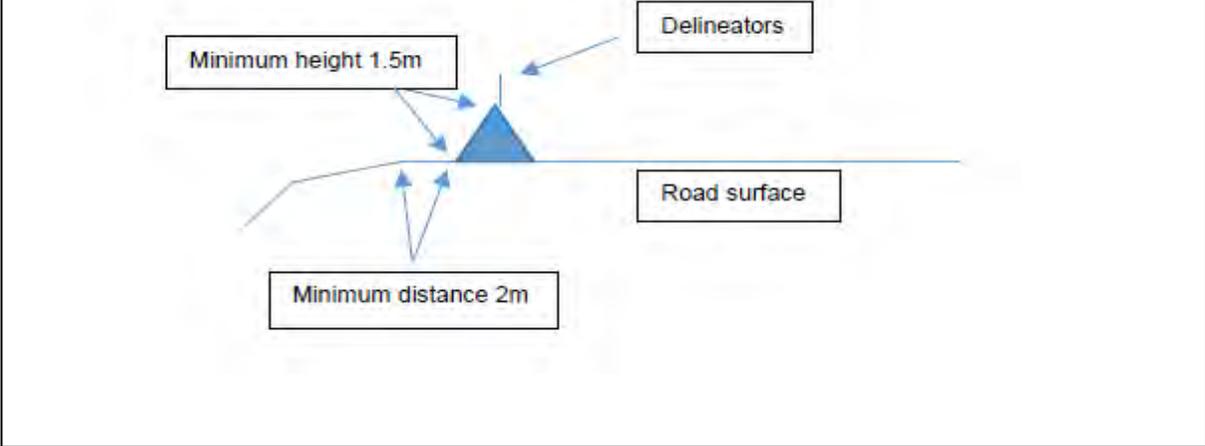
ID	Management Measures	Timing	Responsibility
TR58	<p>Areas shall have earthen mounds delineating the area from main traffic roads and signed posted with “tarping area”. The risk controls for tarping include</p> <ul style="list-style-type: none"> <li>All road trucks shall have cabin or ground-activated tarping mechanisms for truck and trailer bodies;</li> <li>Any viewing platforms made and or installed at designated tarping areas shall comply with AS 1657: 2013 Fixed Platforms, Walkways, Stairways and Ladders – Design, Construction and Installation;</li> <li>Signage shall be displayed at the where platforms are installed stating that personnel are prohibited from accessing (climbing) the truck from the platform</li> </ul>	At All Times	Area Managers
<b>Road Design, Construction and Maintenance</b>			
TR59	<p>Road design and construction for all road outside the opencut and stackpile areas shall be undertaken in the following manner:</p> <ul style="list-style-type: none"> <li>The design and construction of roadways shall take into account any in situ overhead power lines and structures and design around them where possible;</li> <li>For two-way traffic roads, the width shall be a minimum of 3.0 times the width of the widest vehicle operating on the site for straight sections of the roads;</li> <li>For bends and corners, the road width shall be a minimum of 4.0 times the width of the widest vehicle;</li> <li>For one-way traffic roads, the width shall be a minimum of 1.5 times the width of the widest vehicle;</li> <li>Where this is not possible, additional controls (passing bays, reduced speed limits, additional safety berms (<b>Figure 3-1 Example of Dual Lane into a Single Lane with Void Safety Berm and Safety Barrier</b>) and signage and radio communication procedures) shall be implemented;</li> <li>All roadways shall be designed and constructed (where possible) to eliminate gradients steeper than 1:10;</li> <li>Roads shall be made of suitable layered material which provides good compaction, which reduces water penetration and the likelihood of cracking, sinking or slippage;</li> <li>Road surfaces shall be formed and or sheeted with suitable material which provides a firm surface and adequate traction for all vehicles to safely operate upon;</li> <li>Roads shall be designed with cambers of no greater than 2 degrees;</li> <li>Corners shall be designed with cross-falls of no greater than 5 degrees; and</li> <li>Drainage provisions shall be installed on all roadways, levels and benches to remove pooled water from rain events.</li> </ul>	Construction	Road Designers

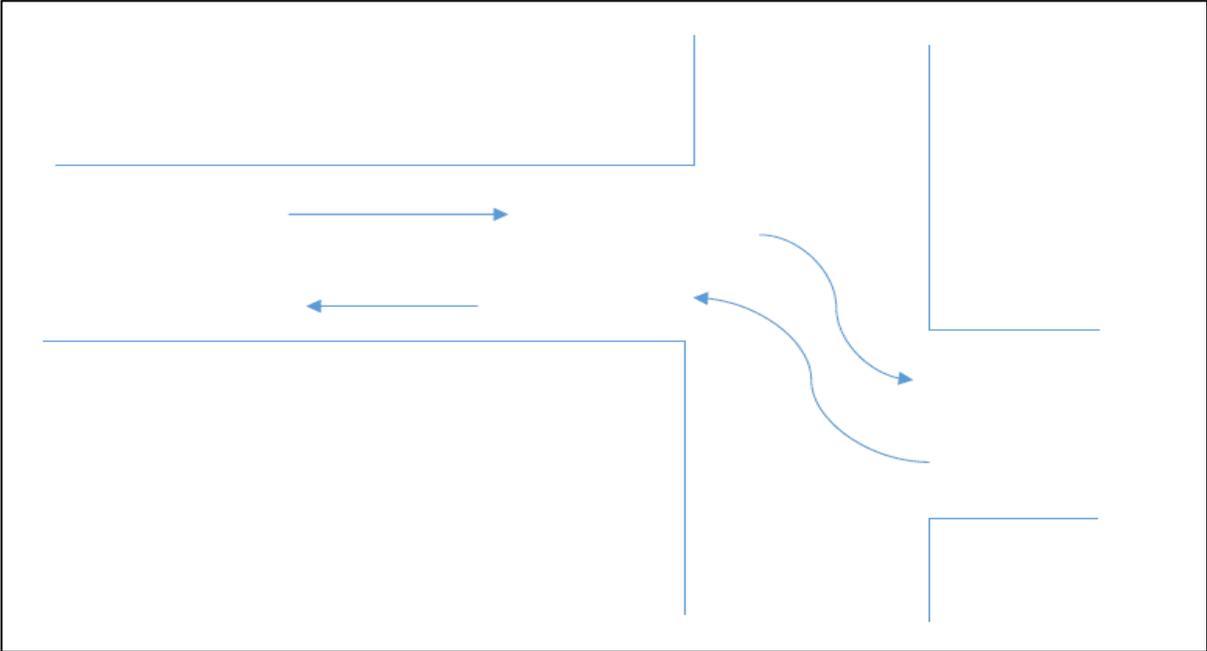
ID	Management Measures	Timing	Responsibility
	<p>Figure 3-1 Example of Dual Lane into a Single Lane with Void Safety Berm and Safety Barrier</p>  <p>The diagram illustrates a road layout where a dual-lane road transitions into a single-lane road. A central 'Void' is shown, bounded by a 'Safety bund towards void'. A 'Down ramp' leads from the dual-lane section towards the void, and an 'Up ramp' leads from the void back to the single-lane section. A vertical safety barrier is positioned between the void and the single-lane road.</p>		
	<ul style="list-style-type: none"> <li>Where roads are divided by a centre berm, a 'Keep Left' or 'Keep Right' sign shall be mounted at the beginning of the centre berm dividing the road;</li> </ul>		

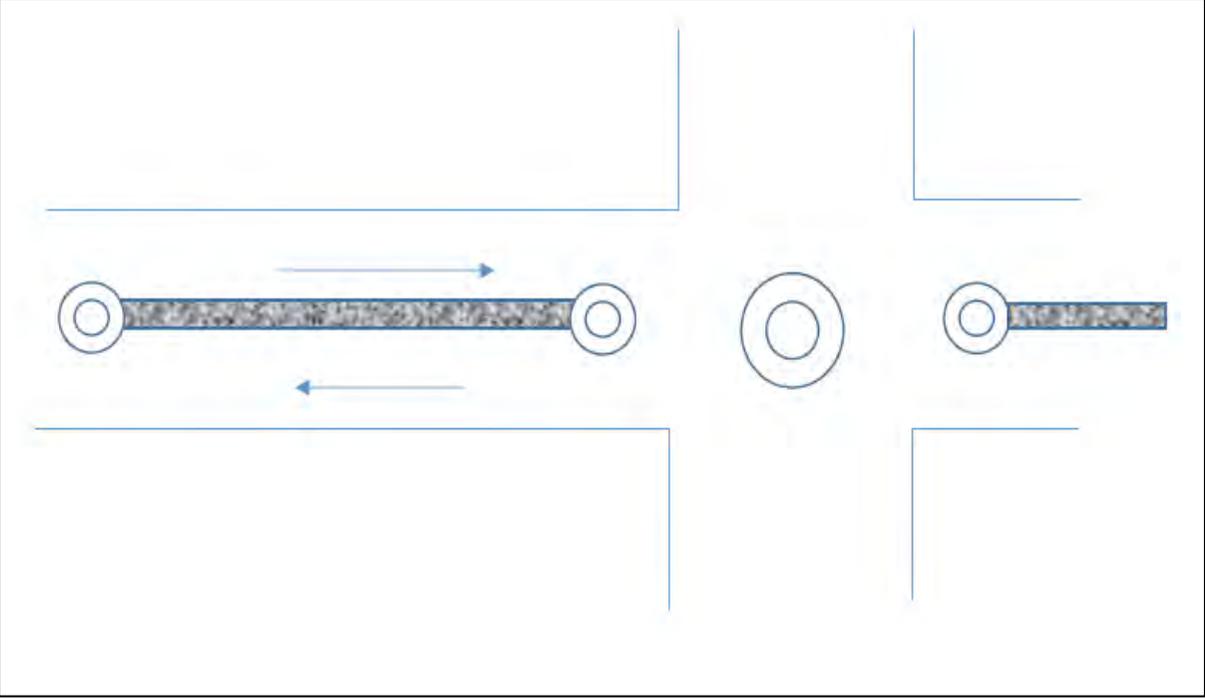
ID	Management Measures	Timing	Responsibility
	<ul style="list-style-type: none"> <li>Hazard warning signage shall be displayed a minimum 30 m prior to the centre berm dividing the road to alert the driver and operators of upcoming road condition.</li> </ul> <p><b>Note:</b> Where passing bays are used, a procedure shall be in place detailing the road rules, and clear signage explaining right of way shall be displayed.</p>		
	<p>Maintenance</p> <ul style="list-style-type: none"> <li>Roadways shall be regularly watered and graded / maintained to control dust generated from vehicle traffic on site;</li> <li>Major on-site road maintenance shall occur outside of production hours, where possible;</li> <li>All workers shall be notified (e.g. toolbox and prestart meetings, UHF radio communication) when on-site road maintenance is conducted;</li> <li>Maintenance on roadways shall be coned or flagged off with signage for roadworks and reduced speed limits in place to alert all traffic;</li> <li>Road surfaces shall be maintained by in-filling and resurfacing, where required;</li> <li>Obstacles and debris shall be cleared from the road at all times;</li> <li>Roadways shall be inspected for any cracking, sinking or slippages, including during and after periods of heavy rain events;</li> <li>More frequent inspections and maintenance shall be given during periods of heavy rain events; and</li> <li>Site roadway inspections shall be completed and documented at a minimum, quarterly.</li> </ul>	At All Times	Area Managers
<b>Road Signage</b>			
	<p>All traffic management signage shall comply with the following Australian standards:</p> <ul style="list-style-type: none"> <li>AS 1744: 1975 Standard Alphabets for Road Signs; and</li> <li>AS/NZS 1906.1: 2007 Retro-reflective materials and devices for road traffic control purposes – Retro-reflective sheeting.</li> <li>AS 1742.3: 2009 Manual of Uniform Traffic Control Devices, Part 3: Traffic Control for Works on Roads.</li> </ul>	Construction	Area Managers

ID	Management Measures	Timing	Responsibility
	<ul style="list-style-type: none"> <li>• AS 1743: 2001 Road Specifications.</li> </ul> <p>Signage shall be:</p> <ul style="list-style-type: none"> <li>• Clearly visible and legible at all times and identify traffic management controls and or site risks;</li> <li>• Positioned so they do not create a hazard;</li> <li>• A minimum 2 m from the edges of the road or where safety berms are in place, either on top or on the outer side of the berm (signage must still be visible by all vehicles);</li> <li>• Positioned at all entry points to the site and haul road, instructing vehicle operators give way to heavy mobile plant and trucks; and</li> <li>• Instruct haul truck operators and road truck drivers to use the retarder / exhaust brake on sloped roadways and lower gear.</li> </ul> <p>Signage shall be installed on the entrance to the site stating:</p> <ul style="list-style-type: none"> <li>• Site entry speed limit;</li> <li>• All personnel entering the site must report to the weighbridge / site office;</li> <li>• Radio communication channel (UHF 3);</li> <li>• Emergency communication channel (UHF 12)</li> <li>• Turn on flashing lights when entering; and</li> <li>• Turn off their flashing light when leaving (on inside of gate).</li> </ul> <p>Site speed limits shall be clearly signposted for all following operating areas:</p> <ul style="list-style-type: none"> <li>• Site entry and exit 40 km/h;</li> <li>• Access roads 80 km/h unless stipulated by NT road rules;</li> <li>• Car parking areas 10 km/h;</li> <li>• Go - line areas 10 km/h;</li> <li>• Haul road 40 m/ph;</li> </ul>		

ID	Management Measures	Timing	Responsibility
	<ul style="list-style-type: none"> <li>Offices and workshops 10 km/h.</li> </ul>		
<b>Sign and Stopping Distances</b>			
	<p>All risk controls implemented shall ensure that separation (sight) distances are greater than the stopping distance of the largest vehicle on site.</p> <ul style="list-style-type: none"> <li>Lines of sight shall be maintained at all times for corners, intersections and signage;</li> <li>Stockpiles shall be strategically placed so as not to restrict the vision of vehicle drivers and operators from corner positions, intersections, signage locations and other traffic on site;</li> <li>Vegetation shall be cleared regularly to ensure corners, intersections and signage are visible;</li> <li>Signage shall be cleaned on a regular basis to ensure it remains legible;</li> <li>Install blind spot bubble (convex) mirrors if exit points have blind spots; and</li> <li>Warning signage identifying the road hazard shall be installed 20 m prior to blind corners, intersections and crests.</li> </ul>	At All Times	Area Managers
<b>Edge Protection (Safety Berms / Bunds)</b>			
	<p>Edge protection shall be implemented on all roadways (haul access, bench and levels, stockpiles, waste dumps and run off mine (ROM) pads) where there is a possible risk of vehicles and mobile plant rolling over the edges of embankments, faces and drop offs (<b>Figure 3-2 Example of Edge Protection</b>).</p> <p>Safety berms shall be:</p> <ul style="list-style-type: none"> <li>2 m in from edges of embankments, drop offs or faces where possible;</li> <li>At least the axel height of the largest tyred vehicle operating on the site;</li> <li>Constructed out of a combined of suitable material i.e. fines and solid rock;</li> <li>Be of a consistent triangular shape, kept free from erosion and regularly inspected and maintained; and</li> <li>Delineation markers where operations run at night times.</li> </ul> <p><b>Note:</b> Where it is impractical to use edge protection, alternative controls such as escape ramps and centre berms, shall be considered refer to - 3.7.12 Vehicle Runaway Provisions.</p>		

ID	Management Measures	Timing	Responsibility
	 <p data-bbox="226 786 784 815">Figure 3-2 Example of Edge Protection</p>		
<b>Intersections, Crests and Corners</b>			
	<ul style="list-style-type: none"> <li data-bbox="300 916 1635 1018">• All intersections, crests, corners on roads where mobile plant operate, shall be eliminated, where reasonably practicable. Where they cannot be eliminated, the road shall be clearly signposted (e.g. reduced speed limits, warning signs upon approaching the intersection, crest or corner, right of way rules, give way or stop rules).</li> <li data-bbox="300 1043 1608 1145">• All traffic shall have clear visibility in all directions when entering roadways. Four way intersections shall be eliminated or off set (<b>Figure 3-3 Example of Offset Haul Road Intersection</b>) to reduce the possibility of driving straight through intersections.</li> <li data-bbox="300 1171 1626 1273">• If necessary an island will be installed in the centre of large intersections to reduce the speed at these intersections (<b>FIGURE 3-4 Example of Intersection showing Traffic Safety Devices described in section 3.6.10</b>).</li> <li data-bbox="300 1299 1648 1401">• Where visibility is restricted on crests, rises and corners, the roadway (<b>FIGURE 3-4 Example of Intersection showing Traffic Safety Devices described in section 3.6.10</b>) shall be divided (where practicable) to provide separation for vehicles (e.g. a centre berm and guidance posts).</li> </ul>		

ID	Management Measures	Timing	Responsibility
	<ul style="list-style-type: none"> <li>Centre safety berms shall be a minimum of 1.5 m high and be made of a “more solid” construction to prevent vehicles and mobile plant from punching through berms (<b>FIGURE 3-4 Example of Intersection showing Traffic Safety Devices described in section 3.6.10</b>).</li> <li>Large earthmoving tyres will be placed at each of centre bunds and painted white to highlight the ends of the bunds (<b>FIGURE 3-4 Example of Intersection showing Traffic Safety Devices described in section 3.6.10</b>).</li> </ul> <div data-bbox="226 459 1433 1110" data-label="Diagram">  </div> <p data-bbox="297 1129 1057 1161">Figure 3-3 Example of Offset Haul Road Intersection</p>		

ID	Management Measures	Timing	Responsibility
	 <p data-bbox="304 946 1666 978">Figure 3-4 Example of Intersection showing Traffic Safety Devices described in section 3.6.10</p>		
<b>ROM Pads, Waste Dump and Stockpiles</b>			
	<p data-bbox="226 1075 1084 1107">All ROM (run off mine) pads, waste dumps and stockpiles locations shall:</p> <ul data-bbox="304 1129 1666 1337" style="list-style-type: none"> <li>• Take into account any in situ overhead power lines and structures and design around them where possible;</li> <li>• Have windrows that are at least the axel height of the largest vehicle tipping where there is a risk of mobile plant rolling over the edges of embankments when inspecting or reversing to tip off material or to push off materials;</li> <li>• Be built on an incline to reduce the risk of runaway vehicles and mobile plant free rolling over edges of embankments;</li> </ul>		

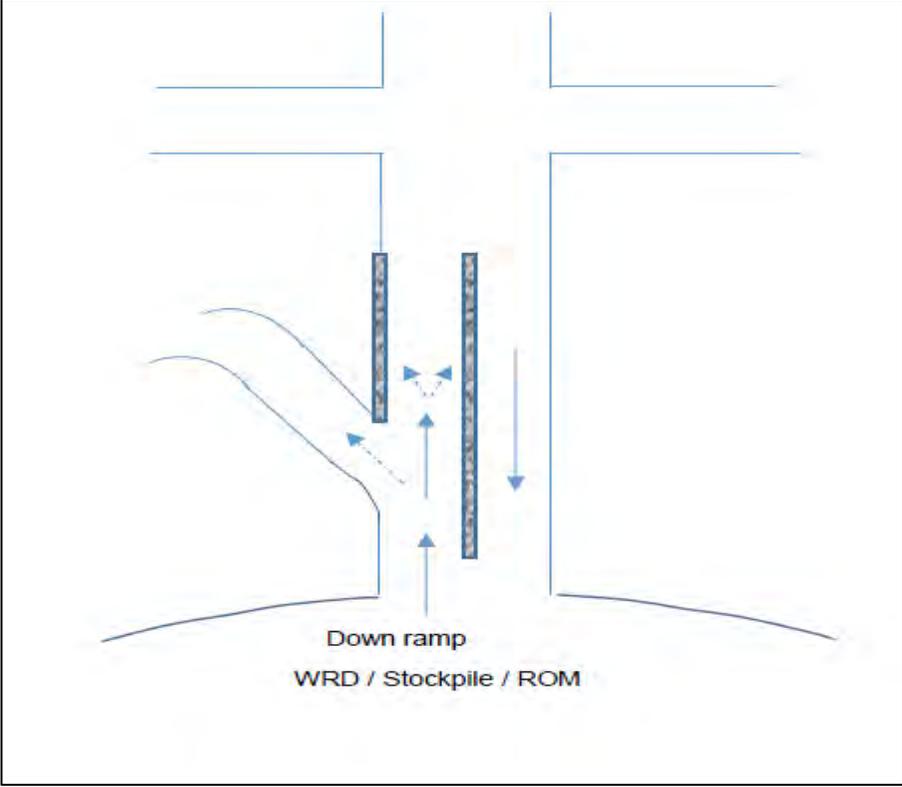
ID	Management Measures	Timing	Responsibility
	<ul style="list-style-type: none"> <li>Be designed and formed to ensure there is adequate room to safely manoeuvre the vehicle or mobile plant on top of pad, dump or stockpile.</li> </ul>		
<b>Runaway Vehicle Provisions in Operational Areas</b>			
	<p>Vista Gold shall implement runaway vehicle provisions in operational areas where there is the possibility for vehicles to run away on steep grades when operating close to their design limits, or experience and history shows there is a problem keeping vehicles under control. The two types of runaway provisions are escape ramps or centre berms (<b>FIGURE 3-5 Example of Runaway Vehicle Provisions</b>) and will be implemented if required.</p>  <p>The diagram illustrates two types of runaway vehicle provisions. On the left, a 'Down ramp' is shown as a vertical barrier on a steep slope. On the right, a 'WRD / Stockpile / ROM' is shown as a vertical barrier on a flatter area. Arrows indicate the direction of potential runaway and the placement of the barriers.</p>	Construction	

Figure 3-5 Example of Runaway Vehicle Provisions

ID	Management Measures	Timing	Responsibility
	<p>Escape ramps shall be:</p> <ul style="list-style-type: none"> <li>Attached to the haul road and designed so the vehicle operator can safely steer the vehicle into the escape ramp;</li> <li>Wide enough to accommodate the largest tyred vehicle on site and of sufficient length to allow vehicle time for it to slow and stop; and</li> <li>Constructed with high rolling resistance material which is not easily compacted.</li> </ul>	Construction	
	<p>Centre berms shall:</p> <ul style="list-style-type: none"> <li>Accommodate the nature and size of the vehicle that will need to drive onto or straddle the centre berm;</li> <li>Be constructed of material that provides sufficient drag on the vehicle to slow and stop its momentum and limits damage to the underside of the vehicle; and</li> <li>Positioned so a vehicle has only limited time to pick up speed before it straddles the berm.</li> </ul> <p>Runaway vehicles on pit ramps are to use the pit wall to bring the vehicle to a halt.</p>	Cosntruction	
<b>High Wall Drop Zones</b>			
	<p>High walls are often located alongside haul roads, levels and benches. These present a hazard in the form of a rock fall or ground collapse. High walls can become less stable over time due to factors such as weathering and effects of water.</p> <p>High walls shall be subject to regular inspection for evidence of rock falls, open joints, water damage, or overhangs;</p> <p>Unstable material shall be removed where possible or, where this is not practicable, access to the area shall be restricted;</p> <p>Earthen mound barricading shall be used to prevent entry into restricted areas; the earthen mound shall be positioned to stop rolling rocks striking personnel or plant and equipment;</p> <p>Signage will be erected on entry points identifying restricted areas; and</p> <p>Positioning of barricades shall take into account the height of the face and how far the rocks out may fall and bounce from the base of the wall.</p>		

ID	Management Measures	Timing	Responsibility
<b>Overhead Power Lines and Structures</b>			
	<p>Power will be delivered from the site power station to a site substation via an overhead power line. Vista Gold will eliminate or control the risk of contact with power lines and overhead structures by having power line corridor away from main access and operational roads where possible.</p> <p>Where this cannot be achieved, signage will clearly identify locations, height restriction of overhead structures and voltage of power lines. Where possible parking areas and high activity areas will be relocated away from power lines and overhead structures. A minor access track will be part of the power line corridor.</p> <p>From the site substation, power will be fed to the main infrastructure via underground HV cabling with the required signage identifying the location of the underground cables.</p>		
<b>Isolation / Holding Bays</b>			
	<p>Where there is a possible risk of mobile plant coming into contact with overhead power lines or heat building up in the tires as a result of long-haul roads, a bunded (earthen mound) vehicle / mobile plant isolation bay for tyre explosions shall be in place.</p>		
	<p>The isolation bay shall have:</p> <ul style="list-style-type: none"> <li>• Earthen mounds around three sides of the mobile plant (i.e. back, left and right) and be the height of the largest tyred vehicle on site;</li> <li>• Be designed to accommodate the largest mobile plant on site;</li> <li>• Signage stating mobile plant isolation bay;</li> <li>• Signage stating that the area shall be kept clear for emergencies;</li> <li>• No-one is allowed to enter this area for 24 hours; and</li> <li>• Before the expected vehicle is returned to service, a competent person shall assess the condition of the tyres.</li> </ul>		
<b>Restricted Access / Exclusion Zones</b>			
	<p>Pedestrian exclusion zones shall be identified, signposted and workers shall be notified of their existence and location.</p>		

ID	Management Measures	Timing	Responsibility
	Signage shall advise unauthorised vehicles or personnel of no entry to the area		
	Visitors are not permitted to walk around the stockpiles unless a worker appointed by the Mine Operator accompanies them. That appointed person must be carrying a UHF radio;		
	Workers are not allowed to walk within stockpile areas unless verbal communication (direct or by UHF radio) has occurred and the drivers and operators of the mobile plant or heavy vehicles operating within that area have received a response. This communication shall occur before the personnel enter the exclusion zone.		
	Customers are not permitted to leave the cabin of their vehicle while parked within the stockpile area unless they are directed to do so by the work area supervisor or appointed person; and		
	Visitors or workers are not permitted to walk within half the face height at the bottom of a quarry face.		
	Signage shall be displayed at the following areas prohibiting unauthorised personnel and vehicles entering:		
	ROM pads, stockpiles and waste dumps, drill pads, blast pads, haul roads, workshops and fixed plant areas.		
<b>Bodies of Water</b>			
	Earthen mound barriers or a security fence will be built or erected within 5 m of the sloping edge (not water's edge) around the edges of bodies of water (e.g. water holes, ponds, dams or silt ponds) in high activity areas where light vehicles or mobile plant and equipment operate.		
	Signs shall be erected around the perimeter and entry points, which warn people "danger drowning hazard". The Mine Operator shall ensure that a competent person has carried out, where there are large bodies of water on site, the risks associated with a wall failure on a water hole, pond, dam or silt pond.		
	<p>If permanent options cannot be implemented these other options will be used:</p> <ul style="list-style-type: none"> <li>• Hi Vis Fluro Orange PVC Triangle on nylon rope and star pickets with caps.</li> <li>• Orange Barrier Mesh Fencing and star pickets with caps.</li> <li>• Hi Vis Orange Temporary Bollards and Bases.</li> </ul>		

## 4. **Information, Instruction and training**

Vista Gold shall ensure that:

- All vehicles and mobile plant have been assessed for risks to health and safety and procedures generated for their safe operation;
- Additional procedures will be developed and implemented for the refuelling of vehicles, escorting of vehicles, maintenance of roadways, extreme weather events and emergencies;
- Operators of mobile plant have the appropriate licence or certificate of competency (where required) for the plant;
- Operators of mobile plant have been instructed, trained in the safe operating procedures and operation of the plant and site specific tasks;
- Operators have been assessed and deemed competent and are supervised in their operating duties;
- Key elements of this traffic management plan shall be captured in the site induction process, safe operating procedures and shall be explained to all workers, contractors and visitors via site induction handbook, training and site notices;
- The requirements for crossing or accessing public roads from the mine site exit points are managed through the site specific induction, training and assessment, signage and operating procedures for light vehicles, road trucks and mobile plant; and
- Site procedures are in place to manage risks to workers and public and safety.

## 5. **Monitoring, Auditing, Reporting and Review**

The TMP is a strategic active document that will be updated or modified during the LOM. Updates are likely to be undertaken following:

- Throughout the Mine Site authorisation processes with the Department of Primary Industry and Resources (DPIR);
- Scheduled Management Plan reviews will be undertaken annually as part of the internal annual reporting requirements, internal auditing plan and Mine authorisation (Mining Management Plan) documentation;
- Changes to on-site operational activities.
- Changes to roads, tracks and road furniture.

### 5.1 Traffic Volume Surveys

Traffic surveys will be carried out annually to monitor traffic volumes generated by the MTPA, for specific traffic that is required to be monitored and to differentiate between vehicle types (eg light and heavy vehicle). During the construction phase, records of traffic entering the MTPA will be taken at the security entrance gate and details taken will include: vehicle type, number of passengers and time entered. These results are kept as records to be used for auditing and monitoring purposes.

### 5.2 Road Safety

Road condition monitoring surveys of the Stuart Highway intersection, Edith Falls Road and Jatbula Road will be undertaken quarterly. Road conditions will be assessed to identify any areas of degradation and safety issues. Information will be recorded for auditing and monitoring purposes and Vista Gold will consult with DIPL with regard to repairs required and the funding arrangements for the repairs.

## 6. Incident reporting

All traffic management incidents both on-site and externally, associated with MTPA activities, will be recorded. Notifiable incidents will be reported to the Regulators and non-reportable incidents will be managed through internal processes.

### 6.1 Safety Incident Reporting

Under the Work Health and Safety (National Uniform Legislation) Act it is a requirement to notify NT WorkSafe if certain incidents occur in the workplace. Notifiable incidents that are reportable under the WHS Act are:

- The death of a person – whether an employee, contractor or member of public;
- A serious injury or illness; or
- A dangerous incident required to notify NT WorkSafe immediately after becoming aware a notifiable incident in their workplace.

The operator is required to notify NT WorkSafe immediately after becoming aware a notifiable incident in their workplace.

### 6.2 Environmental Incident Reporting

All environmental incidents on site will be reported as per the requirements of Environmental Incident Reporting under Section 29 of the *Mining Management Act*. Any environmental incident deemed to be of any significant nature will be detailed in a formal Incident Report and submitted to the DPIR. Under Section 29 an incident must be reported as soon as practicable. Vista Gold will provide a verbal report of an incident within 24 hours and provide a written report within 7 days unless instructed by the Department otherwise.

All environmental incidents off site, but are associated with Vista Gold's activities at the MTPA will be reported to the NT EPA under Section 14 of the *Waste Management and Pollution Control Act*. Notification must be received by the EPA within 24hrs. A written response must be received by the EPA within 7days. The General Manager is responsible for all external incident reporting communications. **TABLE 6-1 Statutory Incident Reporting Requirements** outlines Statutory Incident Reporting Requirements.

Table 6-1 Statutory Incident Reporting Requirements

Entity	Trigger	Timeframe and Contact Details	Incident Reporting Details
NT Environmental Protection Authority (NT EPA)	<p>An Incident outside of mining activities which causes, or is threatening or may threaten to cause pollution resulting in material environmental harm or serious environmental harm, or breach of operating licence compliance requirements.</p> <p>WDL compliance</p>	<p>&lt;24 hrs post incident</p> <p><a href="mailto:ntepa@nt.gov.au">ntepa@nt.gov.au</a> <a href="mailto:pollution@nt.gov.au">pollution@nt.gov.au</a></p> <p>Written response to the EPA within 7 days.</p>	<p>Section 14 of the <i>Waste Management and Pollution Control Act</i>.</p> <p>Section 14 Incident Reporting Form requires the following details:</p> <ul style="list-style-type: none"> <li>• Incident causing or threatening to cause pollution;</li> <li>• Date &amp; time;</li> <li>• How the pollution has occurred, is occurring or may occur;</li> <li>• Attempts made to prevent, reduce, control, rectify, investigate and/or clean up the pollution or resultant environmental harm caused or threatening to be caused by the incident; and</li> <li>• Operator details; and</li> <li>• The form is to be signed by the HSEC Manager and/or General Manager for submission.</li> </ul>
Department Primary Industry and Resources (DPIR)	<p>An Incident on MLs / E's that causes environmental harm that:</p>	<p>As soon as practicable.</p> <p><a href="mailto:mineral.info@nt.gov.au">mineral.info@nt.gov.au</a></p>	<p>Section 29 of the <i>Mining Management Act</i>.</p> <p>The Section 29 Notification of Environmental Incident Form requires the following details:</p> <ul style="list-style-type: none"> <li>• Site and operator details;</li> <li>• Location occurred and area impacted (GPS coordinates);</li> <li>• Date and time;</li> <li>• Description of incident;</li> <li>• Emergency and remedial actions taken;</li> <li>• Nature of impact and severity;</li> </ul>

			<ul style="list-style-type: none"> <li>• Current situation;</li> <li>• Details of sampling undertaken; and</li> <li>• Notification status internally and externally; and</li> <li>• The form is to be signed by the Environment Manager and/or General Manager for submission.</li> </ul>
NT WorkSafe	<p>Incident which results in either:</p> <ul style="list-style-type: none"> <li>• Death of a person;</li> <li>• Serious injury or illness; or</li> <li>• Dangerous incident.</li> </ul>	<p>Notification to NT WorkSafe as soon as practicable.</p> <p>Tel: 1800 019 115  <a href="mailto:ntworksafe@nt.gov.au">ntworksafe@nt.gov.au</a></p> <p>Notification form submitted within 48hrs</p>	<p>Section 35 to 39 of the <i>Work Health and Safety (National Uniform Legislation) Act</i>.</p> <p>The NT WorkSafe Incident Notification Form requires the following details:</p> <ul style="list-style-type: none"> <li>• Person submitting details;</li> <li>• Incident details including date, time and human injury details;</li> <li>• Work activity being undertake at the time of incident;</li> <li>• Witness(es) details;</li> <li>• Details of injured / deceased persons;</li> <li>• Summary of injury or illness;</li> <li>• Future remedial actions; and</li> <li>• The form is to be signed by the General Manager or delegate for submission.</li> </ul>
Aboriginal Areas Protect Authority	Entrance and/or damage of sacred site or restricted works area.	<p>As soon as practicable.</p> <p>Tel:(08) 8999 5511</p>	<p>No standard notification form is available. However, the following should be provided within the initial notification:</p> <ul style="list-style-type: none"> <li>• Location of the site (grid reference);</li> <li>• AAPA certificate pertaining to the site;</li> <li>• Summary of damage;</li> <li>• Name and organisation of discoverer;</li> <li>• Type and method of interference (exposed and/or damaged); and</li> <li>• Photograph of damage.</li> </ul>



Heritage Branch	Discovery or damage to items of heritage value.	As soon as practicable Tel: (08) 8999 5039	Seek advice from the Heritage Council.
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## 7. Complaints

The MTPA has the potential to impact upon the local community both negatively and positively. The mitigation measures developed through the Sub-management Plans are designed to mitigate and reduce any impacts. Should complaints be received from the public in relation to the MTPA activities, they will be logged within the complaints register including:

- Date;
- Name and location of complainant;
- Contact details;
- Complaint;
- Aspect;
- Flow-up Actions / Mitigation Measures; and
- Closeout Approval.

All complaints will be investigated to determine the source of the complaint, identify any underlying cause, establish additional investigation measure (if required), summarise corrective actions and undertake follow-up to ensure corrective actions are undertaken. The outcomes of investigations will be shared with the complainant and summarised in monthly reporting and the Annual Performance Review.

### 7.1 Vista Gold Commitments

Vista Gold places a high priority on safety and environmental protection. As a result, Vista Gold is dedicated to providing the appropriate training and equipment to meet all relevant standards and goals. Vista Gold is very clear in communicating that safety and environmental protection are personal as well as corporate responsibilities.

#### 7.1.1 Commitments to Traffic and Transport

Vista Gold is committed to the construction, mining and rehabilitation phases of the MTPA through active site management, maintenance of assets and the environment. It is Vista Gold's aim to have no injuries to personnel or contractors and no non-conformances with operating conditions. Vista Gold's commitments to Traffic and Transport at the MTPA are in **TABLE 7-1 Traffic and Transport Commitments**.

Table 7-1 Traffic and Transport Commitments

Traffic and Transport	
Impact Area	Proponent Commitment
Increased vehicle and freight traffic	Amend the Transport Management Plan. Develop community consultation strategy.
	Use of pooled vehicles such as buses and work vehicles (to minimise exposure).
	Fitness for work assessments for site personnel.

Traffic and Transport	
Impact Area	Proponent Commitment
	Workforce management strategy and Traffic Management Plan to address driver fatigue.
	Prepare Contractor Management Plan.
	Regular pavement condition review of Edith Falls Road.
	Liaise with Northern Territory Government to ensure funding and maintenance routines are appropriate.
	Consolidation of freight and reagent transportation to rationalise transport movements.
Dangerous goods transport	Transport of dangerous goods in accordance with relevant legislation with measures incorporated into the Traffic Management Plan.
	Prepare Incident Management Plan.
	Comply with International Cyanide Management Code.
	Prepare Contractor Management Plan.
	Consolidation of freight and reagent transportation to rationalise transport movements.

File Name: *Appendix Q - Traffic Management Plan.docx*

Document Status

Revision	Author	Reviewer		Approved for Issue		
		Name	Signature	Name	Signature	Date
REV 0	John Ross	James Hill		Nicole Conroy		06/09/2017
REV 1	James Hill	Jill Woodworth		Jill Woodworth		16/11/2017
REV 2	Brent Murdoch			Brent Murdoch		31/10/2018

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