# Traffic management audit Site: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# Date conducted:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |
| --- |
| 1 Traffic management plan |
| |  |  |  |  | | --- | --- | --- | --- | | **Point** | **Standard** | **Standard met** | **Comments** | | 1.1 | The operation has prepared and approved a traffic management plan. |  |  | | 1.2 | The traffic management plan sets out requirements for permitting a vehicle driver to operate equipment on the mine. |  |  | | 1.3 | The traffic management plan sets out the design requirements for access roads leading to the mine. |  |  | | 1.4 | The traffic management plan sets out the design requirements for mine internal roads, open pit roads and other vehicle operating areas within the mine. |  |  | | 1.5 | The traffic management plan sets out the design requirements for the standard and formation of intersections at the mine. |  |  | | 1.6 | The traffic management plan sets out the design requirements for the standard and formation of parking areas at the mine. |  |  | | 1.7 | The traffic management plan sets out the design requirements for warning signage, traffic signage, and devices to control the speed and movement of traffic within all areas of the mine. |  |  | | 1.8 | The traffic management plan sets out design requirements that, so far as is practicable, segregates the transport routes used by heavy vehicles, road trains, and buses/light vehicles. |  |  | | 1.9 | The traffic management plan sets out the design requirements for the control and segregation of the traffic/pedestrian interface within all areas. |  |  | | 1.10 | The traffic management plan sets out the design requirements for the standard and formation of roads in the vicinity of infrastructure such as fixed plant, services, buildings and structures. |  |  | | 1.11 | The traffic management plan sets out the design requirements for the standard of lighting. |  |  | | 1.12 | The traffic management plan sets out the design requirements for the standard and formation of roads which intersect power line corridors. |  |  | | 1.13 | The traffic management plan sets out the requirement for the standard of communication and equipment to be utilised in mobile equipment and in pedestrian interface areas. |  |  | | 1.14 | The traffic management plan sets out the management duty and responsibility requirements for ensuring compliance with the plan. |  |  | | 1.15 | The traffic management plan sets out the requirements for managing human factors and fitness for work requirements. |  |  | | 1.16 | The traffic management plan sets out the road rules for all vehicle operators. |  |  | | 1.17 | The traffic management plan sets out a schedule of inspections and checks for maintaining compliance with the traffic standards. |  |  | | 1.18 | The traffic management plan is updated by the principal employer in accordance with a change management policy. |  |  | | 1.19 | A traffic management audit is carried out on a regular basis. |  |  | |
| 2 Mine access roads |
| |  |  |  |  | | --- | --- | --- | --- | | **Point** | **Standard** | **Standard met** | **Comments** | | 2.1 | Speed and traffic control signs are displayed along the access road. |  |  | | 2.2 | Direction signs are provided along the mine access road and at the mine entry point. |  |  | | 2.3 | Measures are implemented at all mine access points to prevent inadvertent access. |  |  | | 2.4 | Marker guides and reflectors are provided along the mine access road. |  |  | | 2.5 | Roadside hazards are protected by a suitable barrier. |  |  | | 2.6 | Safety signage to warn of a hazard and prevent incidents is displayed along the mine access road. |  |  | | 2.7 | Road line markings are provided and maintained on the sealed access road. |  |  | | 2.8 | A clear zone free from hazards is maintained on each side of the road. |  |  | |
| 3 Road standards |
| |  |  |  |  | | --- | --- | --- | --- | | **Point** | **Standard** | **Standard met** | **Comments** | | 3.1 | The mine roads and other vehicle operating areas are built utilising the correct sequence of materials and material competency |  |  | | 3.2 | The primary mine roads and other vehicle operating areas are built in accordance with the width requirements of the largest vehicle currently operating on the primary roads. |  |  | | 3.3 | Secondary mine roads that are not built in accordance with the width requirements of the largest vehicle currently operating on that road have controls which ensure the safe passage of vehicles. |  |  | | 3.4 | Clear zones are maintained on both sides of the road. |  |  | | 3.5 | The mine roads and other vehicle operating areas are built in accordance with safe operating gradients. |  |  | | 3.6 | Any loss of control of mobile equipment on pit ramps is effectively managed through the use of engineering controls. |  |  | | 3.7 | The mine roads and other vehicle operating areas are built with a suitable camber. |  |  | | 3.8 | The mine roads and other vehicle operating areas are built with a suitable super elevation and run in/run out on bends and curved sections of the road. |  |  | | 3.9 | The mine roads and other vehicle operating areas are built in accordance with the required radius of curvature for bends as specified by vehicle equipment manufacturer. |  |  | | 3.10 | The mine roads are designed and built using cut and fill techniques. |  |  | | 3.11 | The mine roads and other vehicle operating areas which follow the topography are built in accordance with the acceptable sighting distance for bends and crests based on the speed. |  |  | | 3.12 | The mine road surfaces are provided with adequate drainage. |  |  | | 3.13 | Flood crossings are constructed and depth warning indicators are installed where complete under road drainage is not provided. |  |  | | 3.14 | An adequate windrow or bund of material is provided on the outer edge of each road in the open pit and on the outer edge of any extension of those pit roads on the surface adjacent to a bank or steep slope. |  |  | | 3.15 | Barriers are provided on the edge of each road (other than mine access road and open pit roads) adjacent to elevated road sections and or naturally occurring or manmade hazards. |  |  | | 3.16 | Speed and traffic control signs are displayed along each road and in other vehicle operating areas. |  |  | | 3.17 | Traffic controls are implemented where mine haul roads cross a public roadway. |  |  | | 3.18 | Direction signs are provided within the mine. |  |  | | 3.19 | Traffic control devices are erected along each road and in other vehicle operating areas. |  |  | | 3.20 | Safety warning signs are displayed along mine roads and in other vehicle operating areas. |  |  | | 3.21 | Roadside marker guides and reflectors which are clearly visible at night are provided. |  |  | | 3.22 | In-pit access roads are laid out systematically, with particular attention to in-cabin visibility on bends and in stopping zones where trucking queues may form unexpectedly. Visibility is to be assured on tight bends in low light conditions at night, particularly where the angle of turn exceeds 90 degrees. |  |  | |
| 4 Intersections |
| |  |  |  |  | | --- | --- | --- | --- | | **Point** | **Standard** | **Standard met** | **Comments** | | 4.1 | The mine roads are designed and laid out to avoid four way or greater intersections. |  |  | | 4.2 | Intersections are designed and laid out to minimise blind spot hazards. |  |  | | 4.3 | Intersections are located and spaced a safe distance from other intersections, bends and obstructions, which limit visibility, taking into account vehicle speed, safe stopping distance and an appropriate factor of safety. |  |  | | 4.4 | Intersection gradients are defined and implemented. |  |  | | 4.5 | Traffic control signage is displayed at each intersection. |  |  | | 4.6 | Traffic control devices are utilised to control traffic movement at each intersection. |  |  | | 4.7 | A hazard marker sign (Chevron sign) is displayed at each terminating road. |  |  | | 4.8 | The minor approach roads have a flat area constructed to the minimum length of the longest vehicle using the intersection. |  |  | |
| 5 Parking areas |
| |  |  |  |  | | --- | --- | --- | --- | | **Point** | **Standard** | **Standard met** | **Comments** | | 5.1 | Adequate size designated parking areas are provided for all private vehicles and visitor’s vehicles entering the mine. |  |  | | 5.2 | Adequate size designated parking areas are provided for all mine vehicles at the mine. |  |  | | 5.3 | In parking areas with sealed road surfaces line markings are provided to define traffic flows and vehicle parking bays of suitable width. |  |  | | 5.4 | Where practicable, parking areas are levelled using cut and fill techniques. |  |  | | 5.5 | In those parking areas which are sloped, parked vehicles are orientated at right angles to the gradient. |  |  | | 5.6 | Parking areas have devices installed to prevent any uncontrolled vehicle movement. |  |  | | 5.7 | Pedestrian walkways are provided at all vehicle parking areas. |  |  | | 5.8 | Parking in the mining areas is such that interaction between heavy vehicles and light vehicles/pedestrians is avoided. |  |  | | 5.9 | Large mobile equipment vehicle parking areas are designed, so far as is practicable, to eliminate the need for reverse parking. |  |  | | 5.10 | Vehicle parking areas have a defined traffic flow and are provided with separate signposted entry and exit points. |  |  | | 5.11 | A Lightning Management Plan has been developed and implemented for all large earthmoving machinery parking areas. |  |  | | 5.12 | Disabled parking areas and facilities are provided at the mine. |  |  | | 5.13 | Bus pick up and drop off parking areas and facilities are provided at the site. |  |  | |
| 6 Traffic control signage |
| |  |  |  |  | | --- | --- | --- | --- | | **Point** | **Standard** | **Standard met** | **Comments** | | 6.1 | The traffic signage utilised conforms to an appropriate road safety sign standard. |  |  | | 6.2 | The traffic signage is installed at the required height so as to be immediately observed. |  |  | | 6.3 | The traffic signage is installed and firmly secured. |  |  | | 6.4 | The traffic signage installed is suitable for night operations and low light situations. |  |  | | 6.5 | Customised non standard traffic signage standards are determined and followed. |  |  | | 6.6 | Speed limit variances are limited, controlled and appropriate for the prevailing road conditions and pedestrian hazards. |  |  | | 6.7 | Traffic signage clutter is minimised. |  |  | |
| 7 Pedestrians |
| |  |  |  |  | | --- | --- | --- | --- | | **Point** | **Standard** | **Standard met** | **Comments** | | 7.1 | High visibility clothing is provided to employees who work in operational mobile equipment areas. |  |  | | 7.2 | Pedestrian walkways are provided in all operational mobile equipment areas. |  |  | | 7.3 | The walkways are located a safe distance from the road as far as is practicable. |  |  | | 7.4 | The walkways are provided with a suitable width, well drained, anti-slip, man- made surface. |  |  | | 7.5 | Walkways located beside roads with high pedestrian and/or traffic flows have segregation barriers. |  |  | | 7.6 | Changes in elevation, including steps and stairs, on pedestrian walkways are clearly identified by marking. |  |  | | 7.7 | Steps and stairs on pedestrian walkways are equipped with a handrail or handrails, as appropriate. |  |  | | 7.8 | Designated pedestrian crossing zones are provided at strategic locations. |  |  | | 7.9 | Crossing warning signage is displayed at each pedestrian crossing. |  |  | | 7.10 | Deflection handrail barriers are provided at each high usage pedestrian crossing and road/walkway connection area. |  |  | | 7.11 | Vegetation growth which reduces visibility is trimmed or removed from each pedestrian crossing access point. |  |  | | 7.12 | Safety PPE and traffic controls are utilised where cyclists are present on a mine. |  |  | |
| 8 Traffic movement around buildings, structures and service corridors |
| |  |  |  |  | | --- | --- | --- | --- | | **Point** | **Standard** | **Standard met** | **Comments** | | 8.1 | Protection bollards or segregation barriers are installed at every vehicle interface with infrastructure and ground level hazards such as covered sumps, soak wells, and drains not designed to support any vehicle. |  |  | | 8.2 | Fixed infrastructure protection devices are visible both in low light and night time conditions. |  |  | | 8.3 | Height limit signage and warning devices are installed where vehicles pass under any mine infrastructure. |  |  | | 8.4 | Falling object protection devices, barriers and signage are installed where vehicles or pedestrians are required to pass under the mine infrastructure from which an object could fall. |  |  | | 8.5 | Where there is a vehicle and pedestrian collision potential at building entry/exit points, separate doorways, warning signs, guardrails, mirrors, etc. are provided. |  |  | | 8.6 | High voltage installations and overhead powerline corridors are located, installed and identified to prevent inadvertent contact by mobile plant. |  |  | | 8.7 | Minimum powerline corridor clearances have been established at the mine. |  |  | | 8.8 | Railway corridors are designed and constructed to minimise a collision between rail equipment and road and pedestrian traffic. |  |  | |
| 9 Road construction and maintenance |
| |  |  |  |  | | --- | --- | --- | --- | | **Point** | **Standard** | **Standard met** | **Comments** | | 9.1 | Temporary bypass roads and traffic control measures are provided where there is any obstruction on the road or road construction work is being undertaken. |  |  | | 9.2 | Standards are developed for access restriction into areas which do not meet the traffic management standard or are currently not in operational use. |  |  | | 9.3 | A maintenance programme has been established for the inspection, repair and resurfacing of all sealed roads and their markings. |  |  | | 9.4 | A maintenance programme has been established for the inspection, repair and resurfacing of all unsealed roads. |  |  | | 9.5 | Resources are available and used for the suppression of dust on unsealed roads. |  |  | | 9.6 | A maintenance programme has been established for material spillage clean up on roads. |  |  | | 9.7 | A maintenance programme has been established for the removal of roadside vegetation. |  |  | | 9.8 | A maintenance programme has been established for the inspection, cleaning and repair of roadside signage and delineators. |  |  | | 9.9 | A maintenance programme has been established for the inspection and repair of road side windrows, bunds and/or barriers. |  |  | | 9.10 | A maintenance programme has been established for the cleaning of material build up on process plant structures and in spillage catch nets which are installed over road and pedestrian traffic routes. |  |  | | 9.11 | Road work safety barrier equipment and/or signage is utilised during road maintenance work. |  |  | | 9.12 | Road standards are inspected on a shift and daily basis as applicable. |  |  | |