



**ADRIATIC METALS PLC**  
**VARES PROJECT**  
**TRAFFIC MANAGMENT PLAN**  
  
**SEPTEMBER 2021**

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TRAFFIC MANAGEMENT PLAN

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## INTRODUCTION

### 1.0 Purpose and Scope

Eastern Mining d.o.o. is owned and operated by Adriatic Metals PLC and located in Bosnia and Herzegovina (BiH). Eastern Mining d.o.o. is the holder of a concession for exploration and exploitation in Vares (BiH). The ultimate goal is to revive the mining industry in the municipality of Vares, by exploiting new and existing ore deposits. The project, named Vares Project is polymetallic mine, and has attracted reputable foreign investors in BiH. In many ways, this research project is unique in post-war BiH, both in terms of investment size and development potential<sup>1</sup>.

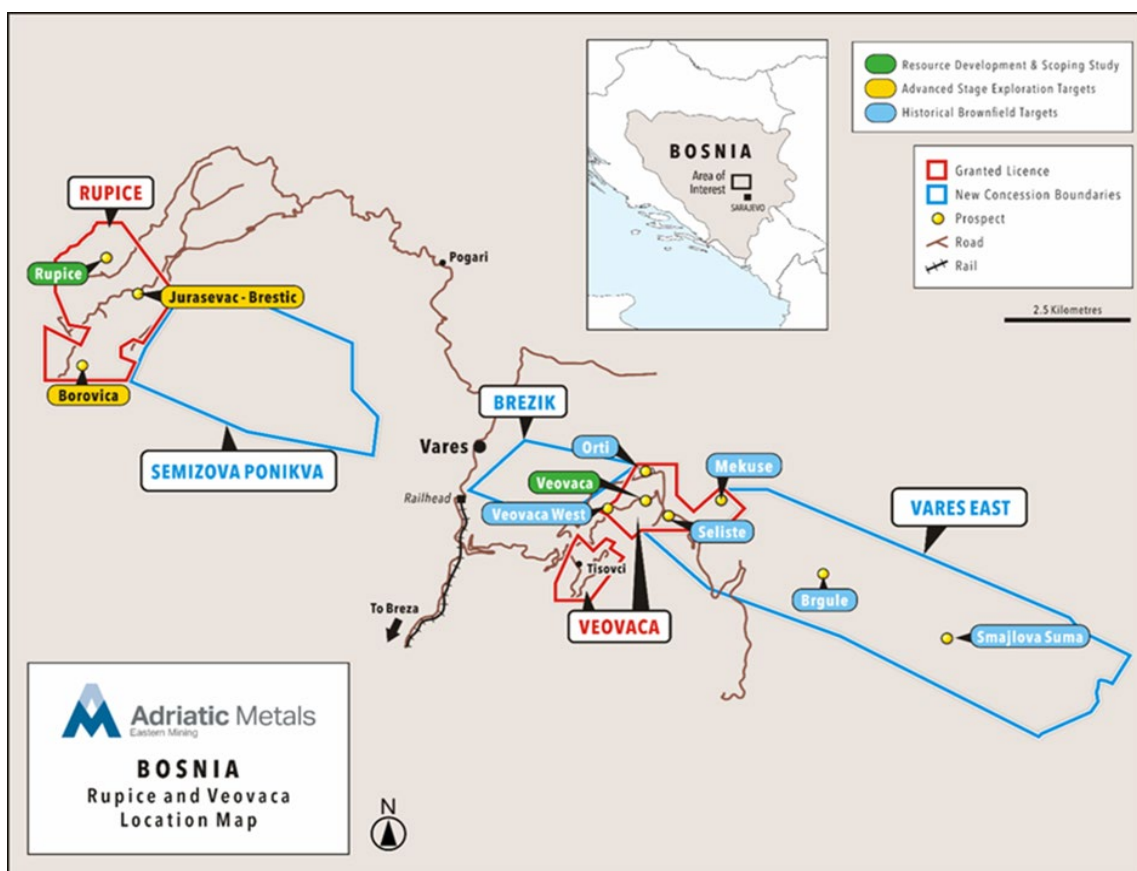


Figure 1.1. Map showing the location of the Vares Project

<sup>1</sup> PRELIMINARY DESIGN FOR THE ROAD FROM THE COMMUNITY „RUPICE“ TO THE COMMUNITY „TISOVCI“ IN LENGHT OF APPROX. 25 KM, VAREŠ

During the construction phase, the existing roads will be used initially to access the Rupice mine site and processing plant Vareš (VPP), but the works also include the upgrade of sections of the proposed haul route and the construction of new sections. Haul trucks with a carrying capacity of up to 30 tonnes will transport the ore and waste material 24.5km between the processing plant Vareš and Rupice Mine area. The route will also be used for the transport of workers, supplies such as diesel and consumables, service vehicles and maintenance equipment. The road, designed to be a gravel road with some surfaced sections, will be maintained on an ongoing basis. The road will be designed by a local engineering group and constructed and maintained by local contractors. This will include ongoing maintenance and keeping the route clear in winter conditions.

The haul route has been designed to avoid communities as far as possible, particularly in the stretch from Vareš town to Rupice. Whilst it will be a publicly accessible route, signage will be installed to advise users of the heavy vehicles using the road. The route of the road passes through the following cadastral municipalities: Borovica, Pogar, Dragovici, Vares, Mir and KO Przici. The route is divided into two sections (not contiguous), the newly designed section of the route is approx. 15.5 km and a section on existing roads of approx. 9.5 km. A certain part of the route which follows the existing roads will need to be rehabilitated and widened in order to accommodate the passage of freight trucks in both directions. The calculated speed for the newly designed road is 30 km / h.

The phases of the project will depend on the haul route for the transportation of construction materials, explosives and transport of the workforce as well operating of a multitude of heavy construction phase vehicles in a relatively short time frame. Transport of construction materials from project sites and local suppliers will take place on the existing road network, which includes gravel roads (e.g the route between Vares and Tuzla). The purpose of the Traffic Management Plan is to implement the mitigation measures identified in the impact assessment, meet the requirements of applicable legislation and standards, set roles and responsibilities, identify transport routes and implement safety measures on these routes, list measures for on-site traffic management, provide training requirements for drivers and workers and monitor compliance with the plan and outcomes arising from this.

This plan overlaps with with other management plans such as :

- Community Health and Safety Management Plan
- Emergency Preparedness and Response Plan
- Biodiversity Action Plan
- Noise Management Plan
- Air Quality Management Plan.

The Plan is in compliance with national legislation, requirements of international financing institutions (e.g. IFC Performance Standards, EBRD Performance Requirements) and other applicable Good International Industry Practices (GIIPs). This Plan is a living document and the responsibilities, procedures and compliance actions should be updated as appropriate.

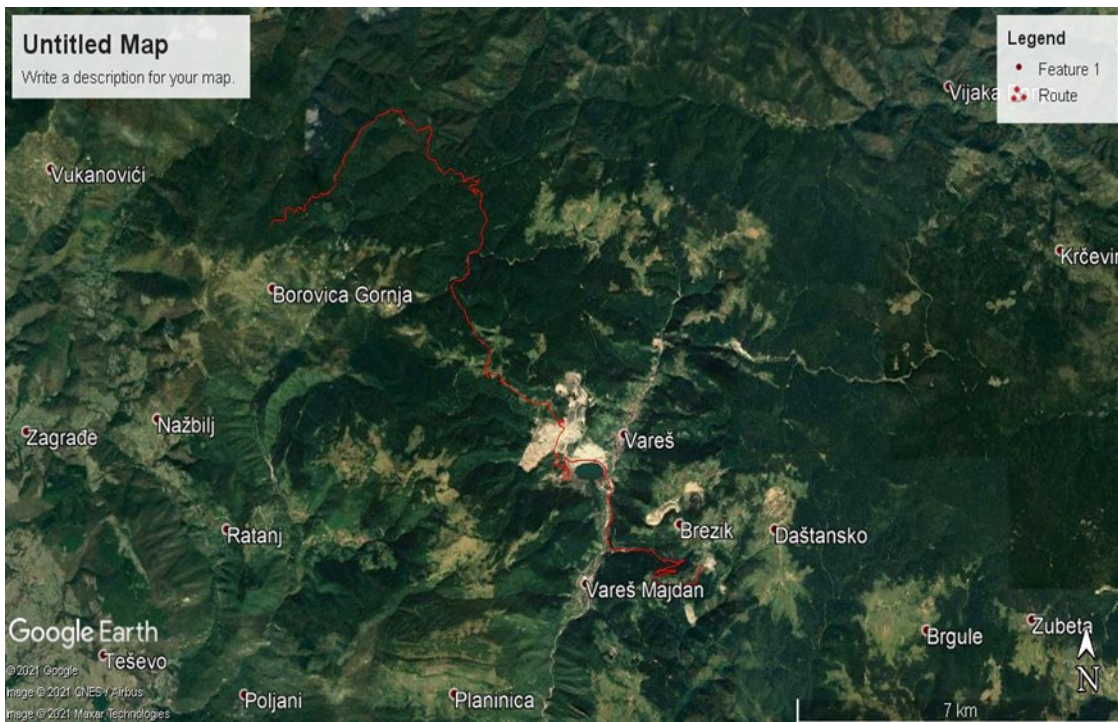


Figure 1.2. Map showing the route of Vares Project

## 2.0 Legislative Requirements and Standards

Eastern Mining intends to implement practices in accordance with international practices in addition to local legislation, respecting principles and policies of the European Bank for Reconstruction and Development (EBRD) and International Finance Corporation (IFC).

### 2.1 Special permit conditions applicable to project

Special conditions from project permits (water consent, environmental permit) that will be applied to the project are:

- Roads, manipulative areas and plateaus must be adapted to the appropriate loads and protected with an adequate pavement, according to the traffic load and technical and technological requirements and conditions of the competent authorities
- Develop a Traffic Management Plan during the execution of works
- Taking traffic management measures in the areas of intersection of existing local roads
- Provide for temporary traffic signals to be placed in places according to Rulebook on traffic signs and signalization on roads, manner of marking works and obstacles on the road and signs given to traffic participants by an authorized person (Official Gazette of BiH, No. 16/07)
- ensure the safety of works as well as the movement of machinery through contractual obligations with by the contractor, with obligatory observance of the safety provisions of the Decree on the arrangement of the construction site, obligatory documentation

on the construction site and participants in the construction ("Official Gazette of the Federation" BiH, No. 48/09, 75/09 and 93/12)

- In order to reduce the risk of accidents during the execution of works, to place warning signs that limit the speed of machinery and vehicles, to prohibit unauthorized access to places of work of heavy machinery.

## 2.2 National Legislation

- Law on roads of the Federation of Bosnia and Herzegovina ("Official Gazette of FBiH", No. 12/2010, 16/2010 - corrigendum and 66/2013")
- Rules on special conditions for transported motor vehicles ("Official Gazette of the Federation of BiH", no. 07/07")
- Law on road transport of the Federation of Bosnia and Herzegovina ("Official Gazette of FBiH, No. 28/06)
- Rules on traffic signs and signalling on roads, manner marking of works and obstacles on the road and signs that participants in traffic is given by an authorized person ("Official Gazette of FBiH", No. 12/2010, 16/2010 - corrigendum and 66/2013")
- Law on occupational safety ("Official Gazette of FBiH", No. 79/2020")
- Law on the transport of dangerous goods ("Official Gazette of SFRY", No. 27/90 and 45/90")

## 2.3 International requirements

- European Bank for Reconstruction and Development (EBRD) Performance Requirement (PR) 1
- European Bank for Reconstruction and Development (EBRD) Performance Requirement (PR) 3
- European Bank for Reconstruction and Development (EBRD) Performance Requirement (PR) 4
- IFC PS1: Assessment and Management of Environmental and Social Risks and Impacts,
- IFC PS3: Resource Efficiency and Pollution Prevention,
- IFC PS4: Community Health, Safety, and Security,
- IFC General EHS Guidelines: 1.1 Air Emissions and Ambient Air Quality, April 30,2007
- IFC General EHS Guidelines: 1.7 Noise, April 30,2007
- IFC General EHS Guidelines: 3. Community Health and Safety, April 30,2007

### 3.0 Roles and Responsibilities

Principal roles and responsibilities for the implementation of this plan are outlined below.

Table 1. Roles and Responsibilities

Roles	Responsibilities
Executive Director (Adnan Teletovic)	<ul style="list-style-type: none"> <li>• Ensure adequate resources are provided for implementation of this Plan.</li> <li>• Ensure the Plan is distributed to all relevant Contractors and subcontractors.</li> </ul>
G&P Maintenance Coordinator (Adis Rozajac)	<ul style="list-style-type: none"> <li>• Implement the traffic management plan in accordance with the developed documentation.</li> <li>• Ensure that employees or subcontractors have the required skills and training to conduct traffic management activities.</li> <li>• Ensure this Management Plan is complied with.</li> <li>• Comply with all necessary requirements.</li> </ul>
Occupational Safety Associate Operations (Melisa Ahmedovic)	<ul style="list-style-type: none"> <li>• Comply with the Eastern Mining Health and Safety Policies</li> </ul>
Vehicle operators	<ul style="list-style-type: none"> <li>• Comply with Traffic Management Plan</li> </ul>
All personnel	<ul style="list-style-type: none"> <li>• Participate in trainings required.</li> <li>• Ensure self-competency in terms of implementation of this plan.</li> </ul>



## 4.0 Traffic management and mitigation measures

Increased traffic volumes and presence of heavy vehicles on the roads were evaluated as a potential impact, based on planned activities. However, unplanned events such as road accidents could occur involving the transportation of construction materials and machinery on roads which will also be used by private users. Increased risks could occur on the route for extraction of materials / waste in the northern part of Vareš, at crossings and uses of the main road. Larger volumes of traffic could increase land road users' risks, resulting in:

- Unintended vehicle collisions resulting in injuries and fatalities;
- Spills of hazardous materials or hazardous waste;
- Public and private asset loss or damage;
- Collisions with local people or animals in crossing areas or in case of lack of crossing points, pavements or traffic signs.

In addition, noise and vibrations resulting from supply trucks associated with the development, in the form of traffic on public roads, may also affect ambient noise and vibration levels in the vicinity of existing receptors. Heavy plant and haul trucks will access the site via the public road traffic network, they will stay within the site area for the lifetime of the project. Any subsequent effects on ambient noise levels in the vicinity of the public road network will occur over a short period of time during the setup and decommissioning of the mine.

It is assumed that the movement of light vehicles, used for the transportation of supplies and site staff along public roads will be restricted to daytime hours for safety reasons.

Soil mounds constructed adjacent to haul roads could be located to provide additional noise attenuation between the haul trucks and the nearest community; this will be incorporated into the design of the road.

Potential air quality emissions considerations relating to traffic are categorised as:

**Fugitive dust:** Particulate matter generated from material transport and handling and unpaved road traffic. The erosive action of vehicle traffic on haul roads is considered to be a significant potential source of dust as the mechanical action of wheels on the road surface causes dust lying on the road surface to be thrown up and become entrained in a moving airflow. The deposition of this dust is dependent on the particle size and meteorological conditions. The erosivity of unsealed haul roads depends on the number and size of wheels, vehicle speeds and the moisture content of the surface material.

Additional dust control measures will be systematically utilised by the Project during construction and operations, as set out in the AQMP; and include:

**Road control programmes** – Appropriate dust suppression techniques will be undertaken, including spraying roads/vegetation with water and/or application of stabilising agents such as salt (winter), gravel, or environmentally inert chemicals, as appropriate. In addition,

adequate equipment and personnel will be supplied to maintain road surfaces to control dust on the haul and access roads;

**Speed and off-road restrictions** – Establishing and enforcing Project safety rules, including the posting and enforcement of speed limits on Project haul and access roads and restricting off-road travel to the maximum practical extent will limit the potential for additional fugitive dust emissions, as well as public safety hazards. Those employees whose jobs include driving as well as haulage contractors will be advised of the safety rules and that driving off established roadways is not allowed. Instruction on driving safety and observation of speed limits will be included in the new employee orientation and annual refresher training and in task training for specific job assignment.

Table 2. Potential impacts and mitigation measures Noise and Vibration part

		Mitigation measures
		Soil mounds constructed adjacent to haul roads will be located to provide additional attenuation between the haul trucks and the nearest community
		Hard surface roads will be installed and maintained to reduce road noise and dust
		Design of the haul road should minimise excess revving
		A speed limit should be imposed to minimise aerodynamic noise
		Haul routes will be well maintained and where steep gradients are required operatives will be trained to minimize engine noise through avoiding unnecessary revving etc
		Vehicle and plant start-ups will be sequenced to avoid simultaneous noise bursts
		All vehicles will be fitted with reversing alarms set at lowest level subject to health and safety considerations
Impacts	Noise and vibrations resulting from supply trucks associated with the development, in the form of traffic on public roads	Perform regular inspection and maintenance of material handling vehicles and equipment to ensure that they have quality mufflers installed, worn parts are replaced, and lubricants are applied so that the design noise-output specifications continue to be met
		If possible, vehicle movements should be limited during the weekend and night time periods to reduce the noise impact during the quieter periods

		Enforce speed limits in relation to road conditions and location of sensitive receptors such as populated areas
		Maintain access road surfaces in good repair to reduce tyre noise
		Ensure continuous traffic flow to avoid prolonged idling

Table 3. Potential impacts and mitigation measures Social Impact Assessment part

		Mitigation measures
Impacts	Public access to the construction site will be limited by a perimeter fence and security booths. Project vehicles will use local roads	Implementation of the SEP and timely disclosure of traffic management plan is assumed
	During construction activities, heavy vehicles and workforce commuting will use existing roads until a new road is built	All employees and contractors to be trained on appropriate use of public roads, to be covered within the employee code of conduct and traffic management plan
	Multi-use haul route and increased vehicles on existing roads due to immigration	Implementation of the traffic management plan, specific training for haul route contractors to ensure implementation of the plan, encouragement of municipality to undertake road clearance in remote areas (limiting public use of haul route)
	The start of heavy vehicle use and workforce commute vehicles could have an impact of the existing road network across the Project area. Further, immigration leading to a rise in the population will inevitably result in more passenger vehicles on roads. Increased road usage could damage existing roads, until a new road is built for the operation stage	Contact details of Logistics/Transport Manager and clearly define traffic routes as agreed
		The Project is to agree and communicate to all drivers speed limits in urban areas and settlements
		Notification signs shall be erected at main public areas to warn local communities about the hazards around the Project sites and transport routes, the presence of heavy vehicles, and any closure or rehabilitation of roads, including alternative routes
		Transparent and clear explanations must be provided to justify the implementation of exclusion and safety zones around the Project site and transport routes
		Construction road traffic of heavy vehicles via residential areas of Pogar, Položac, Tisovci and Semizova Ponikva must be banned between night-time hours of 10PM to 6AM which must be included in the Traffic Management Plan
		There will be a combined impact from the haul fleet, staff buses and project delivery vehicles and an increased number of private cars on the road, due to immigration and greater spending capacity of residents. An assessment of key junctions in the area has shown that there is capacity to handle this increase (Appendix 5.9.1.). Parking

	spaces in the main town of Vareš are already limited and will be further strained throughout construction and operation due to increased population. The implementation of the employee park and ride service will assist in reducing parking needs within the town. This car park will be made available to the local community, assuming sufficient capacity.	Transparent and clear explanations must be provided to justify the implementation of exclusion and safety zones around the Project site and transport routes
		Snow clearing during winter months on haul route, transport routes and existing public roads Specific training to be carried out with haulage contractors on a regular basis

Table 4. Potential impacts and mitigation measures Air Quality part

		Mitigation measures
Impacts	Fugitive dust generated by truck movements	Provide and maintain sections of hard surfaced road near residential locations and near to particularly sensitive habitats
	Fugitive dust generated from haul trucks on haul roads and construction access roads	Adequate equipment and personnel to maintain road surfaces to control dust on the haul and access roads
	The erosive action of vehicle traffic on haul roads is considered to be a significant potential source of dust as the mechanical action of wheels on the road surface causes dust lying on the road surface to be thrown up and become entrained in a moving airflow	Speed and off-road restrictions – Establishing and enforcing Project safety rules
		Restrict off-road travel unless absolutely necessary
		Limit number of trips with efficient loading procedures for material transport
	Vehicle exhaust gases (fueled by diesel), with emissions including NOx, particulates (PM10) and CO2	Apply stabilizing agents on high dust areas
		Top-wet truckloads of dusty material
		Spray water on unpaved roads and traffic areas
		Maintain gravel/laterite cover on unpaved roads and traffic areas
		Provide sections of hard surfaced road near residential locations and along the section of road within/near to the mountain hay meadow and hydrophilous tall herbaceous vegetation habitats
		Enforce speed limits for heavy equipment and general traffic on unpaved roads
		Train operators and drivers about maximum idling times

		Install appropriate emissions control equipment on vehicles
		Perform regular maintenance and inspection of vehicles and mobile equipment, including their emissions control systems

Table 5. Potential impacts and mitigation measures Greenhouse Gases and Climate Change part

		Mitigation measures
Impacts	Vehicle exhaust gases (fueled by diesel), with emissions including NOx, particulates (PM10) and CO2 include:	Staff transport will be provided with the bus services this will reduce fuel consumption
	On-road vehicles for hauling of ore and barren material	Where possible fuel efficiency will be a factor in the selection of vehicles as this will not only reduce emissions but also reduce operating costs
	Non-road vehicles for mining of ore	In addition to the efficiency of the fleet itself, opportunities will be sought for improving the use of the vehicles
	Container transportation of product to the rail loadout facility at Droskovac Railway Station	As the mine logistics and scheduling are progressed, consideration will be given to the optimisation of vehicle and equipment movements to improve efficiency and reduce overall CO2 emissions
	Transportation of staff to site via bus	Install appropriate emissions control equipment on vehicles
	Activities from the closure of the mine will also contribute to GHG emissions. These activities include the use of on-road and non-road vehicles for the removal and dismantling of ancillary mine facilities, and reclamation of the open pits, waste facilities	Perform regular maintenance and inspection of vehicles and mobile equipment, including their emissions control systems

Table 6. Potential impacts and mitigation measures Biodiversity part

		Mitigation measures
	24.5km long haul road, 15.5km of which will require upgrading from existing forestry tracks	Vehicular access to the Project-affected area will be minimised. All workers will arrive on site via park and ride bus
	Construction of the haul road may cause a barrier effect or increase collision risk to larger mammals/keystone predators	Vehicle speeds on access and haul roads will be controlled (15 km/h on unpaved roads) to minimise dust emissions and the risk of mortality of animals
	Dust generated by truck movements and earth moving (Dust deposition onto terrestrial and aquatic vegetation, reduced plant productivity within the deposition zone. Suitability of	Instruction on driving safety and observation of speed limits will be included in the new employee orientation and annual refresher training and in task training for specific job assignment

Impacts	habitat for amphibians will also be reduced within the deposition zone)	Vehicles considered to have the potential to introduce invasive plant species or spread existing invasive plants to areas where they do not currently occur will be washed before entering site or current weed-free locations (wash water to be contained)
	Vehicle exhaust emissions including NO <sub>x</sub> , SO <sub>x</sub> , CO, CO <sub>2</sub> and diesel particulates and dust from roads. Significant deposition and associated changes in natural vegetation predicted to occur within a 50 m buffer along roads	Maintain the surface of haul roads in good condition and impose a speed limit
	Traffic on access roads and public highways - Disturbance to animal populations and barrier effects	Haul routes will be well maintained and where steep gradients are required operatives will be trained to minimize engine noise through avoiding unnecessary revving
	Dust emissions - Smothering of vegetation, contamination by pollutants, reduced productivity	Vehicle and plant start-ups will be sequenced to avoid simultaneous noise bursts
	Noise, light and disturbance - Hazel grouse and large mammals may be displaced as noise and disturbance is 24-hour. Brown bear, lynx, grey wolf and wildcat likely to completely avoid the area, if passing through area	All vehicles will be fitted with reversing alarms set at lowest level subject to health and safety considerations
		Vehicle and mobile plant machinery operators and drivers will be instructed in the appropriate use of headlights (high and low beams) to reduce impacts

Table 7. Potential impacts and mitigation measures Soil part

Impacts	Haul roads, transportation of ore, workers and chemicals  Installation of new road. Driving width of 5 m plus an additional 0.5 m pavement and 0.5 m embankment.  Soil in the vicinity of the road where deposition of vehicle emissions, spillages and pollution may occur.  After closure the road will be left intact for transport infrastructure in the region	Mitigation measures
		Previously undisturbed soils will be handled and stored with extra care as they can be reused for the embankments and remediation during closure
		Use efficient vehicles with lower emissions

## 5.0 Monitoring and Reporting

The implementation of the traffic management plan must be regularly monitored to ensure their ongoing effectiveness. This will include :

- Regular inspections of the route and maintenance schedules, preferably conducted by someone tasked with the responsibility for implementing actions
- Driver behaviour monitoring
- Vehicle inspections
- Review of grievances and community concerns relating to traffic
- Biodiversity monitoring especially of dust deposition on vegetation and animal sightings
- Inspections of culverts, run off and drainage ditches for sedimentation and pollution
- Regular updating of the traffic management plan
- Refresher training
- Incident investigation process, ensuring implantation of effective controls
- Regular consultation with workers on site

A sample checklist for subjects to be covered during inspections is provided in Annex 1. A vehicle tracking system will be established during the transport of the concentrate. There is currently a description of general occupational safety measures for all employees of Eastern Mining, as well as for all other subcontractors (No. 274/2021 from march 2, 2021) and there is a point regarding of proper and safe driving that includes banning alcohol and wearing a seat belt. The company is currently in the phase of preparing and drafting documents and procedures that will regulate all issues, rights, obligations and restrictions regarding safety and secure driving in compliance with all legal regulations of BiH, but also recommendations and guidelines at the international level.

## 6.0 Training

Required number of training programs will be provided for the all Eastern Mining employees, as well as the environmental team, and relevant subcontractors. It will be discussed for employees and subcontractors about management tools for traffic management. Materials for trainings will be created and updated by the Environment and Social team.

Regular internal inspections will be made to ensure that the mitigation measures indicated in this Plan are applied during project.

## 7.0 Review and Update

The results of monitoring will be reported to responsible parties to ensure that the project activities comply with the national legislation and international standards.

Depending on the monitoring results, Traffic Management Plan will be reviewed and updated when necessary.



## Sample form Annex 1.

Inspection Date:

Inspection Location:

<b>Control Measure</b>	<b>Compliance (Yes/No)</b>	<b>Comment</b>
Is a Traffic Management Plan in place and is it regularly reviewed?		
Are traffic management rules being followed by all workers?		
Have sensible speed limits been established and are they being adhered to?		
Do all drivers check their loads before leaving site?		
Do all drivers respect speed limits in urban areas and settlements?		
Is the ban on heavy vehicles in residential areas of Pogar, Polozac, Tisovci and Semizova Ponikva between night-time hours of 10PM to 6AM respected?		
Do all Project vehicles carry appropriate lights for night time and periods of poor visibility?		
Are drivers and operators trained about traffic safety aspects and project-specific traffic rules (risks on local communities, speed limits, work site boundaries) and driving skills improvement on a regular basis?		
Are all vehicles subject to periodic maintenance and inspections?		
Is dust suppression carried out as required without delay?		
Is dust suppression effective?		
Is hard surface roads installed in vulnerable part and maintained to reduce noise and dust?		
Are animal sightings recorded by all drivers?		
Are snow is clearing during winter months on haul route, transport routes and existing public roads?		
Is maintenance of the surface of haul roads performed?		
Is watering of unpaved haul roads with bowsers to maintain a wet surface (or using salt during winter) maintained?		
Is Speed and off-road restrictions – Establishing and enforcing Project safety rules respected?		
Is appropriate emissions control equipment on vehicles installed?		
Vehicular access to the Project-affected area will be minimised?		