

Vedanta Resources Plc

**Sustainability Governance
System**



Guidance Note GN23

Fleet Management

Guidance Note – Fleet Management

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Guidance Note – Fleet Management

1. INTRODUCTION

1.1. Who is this Guidance Note aimed at?

All Vedanta subsidiaries, operations and managed sites, including new acquisitions, corporate offices and research facilities and all new and existing employees and contractor employees. This Guidance Note is applicable to the entire operation lifecycle (including exploration and planning, evaluation, operation and closure).

This Guidance Note is for those operations and individuals (managers, supervisors and employees) whose activities involve driving a vehicle as part of their duties, whether or not this is their main role and in particular those responsible for fleet management or managing employees who drive on behalf of Vedanta operations. This Guidance note is applicable to:

- Vedanta managed operations;
- Vedanta owned/leased fleet vehicles, contractor vehicles, hire vehicles and short term charters;
- Off-road vehicles (meaning conventional multi-wheel drive vehicles);
- On-road vehicles including contracted bus-fleets;
- Special purpose vehicles, e.g. all-terrain vehicles (ATVs);
- Towed equipment; and
- Ancillary vehicular equipment e.g. winches, communications equipment.

The Guidance Note may also form the basis for fleet management system training and communications.

The Guidance Note should be used in conjunction with the Guidance Note GN07 on Risk Assessment and also associated Standards as listed in the relevant sections and at the back of this Guidance Note.

1.2 What is the aim of this Guidance Note?

This aim of this Guidance Note is to provide assistance to Vedanta operations in fleet management, in particular in relation to driver safety and work related road risk. Effective fleet management aims at avoiding, reducing and minimizing fatal and serious accidents associated with work related driving through minimising road risk. It also aims to reduce the impact on the environment through effective use of resources such as fuel through journey management etc.

The guidance provides standards for the selection and management of all vehicles and vehicle fleets owned, operated, hired or leased by Vedanta and vehicles used by contractors when working for Vedanta, so that safety and sustainability issues are considered from the beginning and continually improved as the fleet is replaced.

This Guidance Note covers the management of fleet involved in the movement of Vedanta products and the management of light vehicle fleets used in the transportation of people (including cars) and light cargo and motorbikes. It does not cover equipment such as warehouse handling equipment forklift trucks (FLTS).

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1.3 What issues does this Guidance Note address?

This Guidance Note presents the framework for developing, implementing and maintaining systems and procedures for fleet management and work related driver safety. Vedanta has operations in different parts of the world with varying levels of road risk and driving cultures. It is therefore important that Vedanta as an organisation has a broadly consistent approach to the management of its fleet and the health and safety of its drivers in its operations. This standard provides a suggested framework and approach to manage the risk of fleet and drivers whilst at the same time allowing flexibility for operations to implement their own systems in a way that is appropriate to their particular needs, cultures and the risks they are managing.

The principles that are addressed are:

- The selection and maintenance of fleet vehicles (and related equipment) to provide safe, sustainable and reliable transport;
- Training and behaviour programmes that provide staff with the necessary skills and which foster an appropriate attitude for safe driving;
- Journey planning to enable employees and managers to either avoid driving in the first place, or consider the most appropriate route which provides the safest alternative; and
- Rules on the use of mobile phones and electronic devices.

Managing each of these issues effectively will be the key to success for fleet management and driver safety, but of these the biggest challenge resides in developing the right behaviours and attitudes for safe driving.

The focus of this Guidance Note is to provide preferred methods and outcomes rather than prescriptions whilst at the same time representing a practical “how to” guide for all Vedanta operators. It is intended that the Guidance Note will represent standard baseline guidance for all Vedanta staff within all the operations whilst recognising the need for flexibility at a site and activity level depending on project specific circumstances or regulatory specific requirements. In this sense, Guidance Notes are not designed to be definitive text, nor are they designed to provide prescriptive methods and procedures for undertaking tasks.

1.4 How should this Guidance Note be used?

This Guidance Note is intended to reflect good practice and provide the basis for continual improvement of sustainability issues across the Vedanta operations, which includes fleet management and work related driver safety. The implementation of fleet management systems and driver safety controls is either a regulatory requirement (e.g. through specific country regulations), or at a minimum, best practice.

The Guidance has been designed to be applicable for all Vedanta operations. Each operation should establish a programme to implement and maintain a system for the management of its fleet and driver safety in accordance with this Guidance. Operations should note that in addition to adopting this Guidance, country-specific legal requirements must also be adhered to and may relate to some of the following:

- Basic driving authorisation documents;
- Types, size and class of vehicles allowed on certain roads, training and qualifications for these and associated specific authorisation licenses;
- Communication equipment fitted into vehicles;
- Vehicle safety requirements;

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- Requirements for inspection and maintenance of vehicles used on public roads and/or in the workplace; and
- Vehicle jurisdiction - some vehicles cannot operate outside specified areas in some countries.

The remainder of this Guidance Note is structured as follows:

Section 2: What is Fleet Management?

Section 3: Fleet Management Programme

Section 4: Site Safety

Section 5: Safe Vehicles

Section 6: Safe Drivers

Section 7: Managing the Journey

Section 8: Incidents and Accidents

Section 9: Contractors

At the end of the Guidance Note there is information on Definitions and Related Documentation, as well as the following annexes:

Annex A: Daily Vehicle Checklist

Annex B: Fleet Audit Checklist

Annex C: Example Seat Belt Policy

Annex D: Advice for Drivers – Breakdown Safety

Annex E: Example Vehicle Driver Assessment

Annex F: Examples of Safety Signs

Annex G: Journey Planner

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2. WHAT IS FLEET MANAGEMENT?

Vedanta requires operations to ensure the health, safety and welfare of its employees at all times, and this extends to the time spent by an employee on company business in any vehicle. Fleet management in the context of this Guidance Note is the oversight, co-ordination and facilitation of transport and work-related driving with the aim of reducing and minimizing driver and transport-related accidents and incidents and maximizing the cost effective utilization of resources such as fuel, etc., so as to minimise the impact on the environment.

Effective fleet management can ensure that suitable fleet vehicles are obtained, appropriate maintenance programmes are in place, and a vehicle fleet replacement process is in place that is designed to improve the safety, effectiveness and sustainability characteristics of the fleet.

An employer cannot be totally responsible for how a vehicle is driven, but can certainly influence what the driver does and how it is done through training, instruction and journey planning.

Un-realistic schedules or appointment targets, inadequate training and poor maintenance of vehicles all increase the risk of road accidents.

The benefits of managing fleet and work related driving can be considerable:

- Fewer days lost due to injury;
- Reduced risk of work-related ill health (e.g. ergonomic issues);
- Reduced stress and improved morale;
- Less need for investigation and paperwork due to accidents and incidents;
- Fewer vehicles off the road for repair;
- Fewer missed orders and business opportunities, so reduced risk of losing the good-will of customers;
- Less chances of key employees being banned from driving; and
- Better control over costs, such as wear and tear, fuel, insurance premiums, legal fees and claims from employees and third parties, and reduced running costs through better driving.

Effective fleet management programmes can also influence behaviours and practices in relation to private driving, which could reduce the chances of staff being injured in a vehicle accident outside of work.

3. FLEET MANAGEMENT PROGRAMME

3.1 Segregation of Fleet

The first step in developing a fleet management programme is to understand what fleet there is within the company and how it is used. Operations should therefore undertake a survey of its fleet and break it down into categories, an example being as follows:

- 1) Ownership - company owned, third party owned (leased/hired), contractor owned, and employee owned, but required for business use (sometimes referred to as Grey Fleet).
- 2) Type of vehicle – On-road, off-road, heavy goods vehicle, light goods vehicle, special purpose vehicles (back-hoes, forklift trucks), etc.

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- 3) Typical routes and journeys – local site use, long distance and short distance, haulage and deliveries, light business use etc.
- 4) Materials carried – passengers, aggregates, fuel, hazardous chemicals, etc.

3.2 Risk Assessment

Within the framework of the management systems which operations should already have in place for managing other aspects of health and safety, operations should undertake risk assessments and implement control measures in accordance with the same principles as other workplace risks to ensure work related driving is safe, staff are fit and are competent to drive safely, and adequate controls are in place. Vedanta operations should refer to the guidance note on Risk Assessment GN07. Risk assessments should be undertaken based on the type, route and materials that vehicles are intended to carry.

3.3 Fleet Management Programme

Once background information has been collated regarding the fleet, operations can develop a fleet management programme. In general, there are four elements of a fleet management program. These include:

- Route;
- Pedestrian;
- Vehicle; and
- Driver/Cleaner / Assistant.

This guidance note is intended to provide guidance for the operations to implement a fleet management programme effectively around these four elements. It sets out the basic components of such a programme and how to implement it. The Vedanta Technical Standard TS 18 *Transportation and Logistics Management* specifies what units / operations need to do for all the above aspects.

Work related driver and fleet safety can only be effectively managed if integrated into existing health and safety management systems. (Refer also to Vedanta Guidance Note GN14 on Health and Safety Management Systems). Vedanta operations should therefore review existing health and safety management systems to determine whether they cover driver safety and fleet effectively. The main areas that should be covered are policy, roles and responsibility, operational control and checking, as follows:

- **Policy** - Businesses should include work-related driver safety in their health and safety policy statements.
- **Roles and Responsibility** - Everyone in the business should understand their individual responsibilities in relation to driving and what is expected of them, including how their health and fitness relates to driving. There should be co-operation between departments with different responsibilities for driver safety, such as Human Resources, HSE and Fleet Management departments.
- **Training and Awareness** - Suitable training and awareness programmes should be in place. All staff should understand that Vedanta expects them to drive within the law, safely and responsibly on all work journeys. All managers should be trained to manage work-

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related driver safety as part of their health and safety responsibilities. A training register should be maintained for all staff covering driver training, including renewal dates.

- **Operational Control** - Adequate procedures and systems should be in place to effectively manage driver safety and fleet (e.g. vehicle servicing, work instructions and driver handbooks, travel management plans)
- **Monitoring** – Monitoring activities should be in place such as routine inspections and checks, driver safety audits, vehicle technology which monitors behaviour (where appropriate) and accident and incident reporting and investigation procedures for driving-related incidents.

4. SITE SAFETY

4.1 The Route

Traffic routes are to be established ensuring the segregation (separation) of pedestrians, light vehicles and heavy vehicles/mobile equipment etc. All traffic routes in a workplace must have a driving surface that is suitable for its purpose and the surface of traffic routes must not be uneven, potholed, sloped or slippery.

Operations should therefore review the traffic routes on their site to understand the following:

- Where does the traffic go on the site?
- What potential hazards are on the route?
- Is the road surface suitable for the vehicle and the load carried?
- Are there any slopes on the route?

In undertaking the review, operations could carry out a visual inspection of their traffic routes by walking around the premises, making notes and taking photographs. Hazards and problem areas can be marked on a site plan. From this walkover, there is a need to assess whether existing precautions are enough or if more precautions are required. Examples of checks to be made during this survey are outlined in Table 4.1 below.

Table 4.1

	Vehicle Workplace Checks	Yes/No
	Check the layout of the route is appropriate	
1	Are vehicles and pedestrians kept safely apart?	Yes/No
2	Are there suitable pedestrian (Zebra) crossings points on vehicle routes?	Yes/No
3	Are there suitable parking facilities for all parking needs?	Yes/No
4	Do the vehicle routes avoid sharp or blind bends?	Yes/No
5	Is a one way system used on vehicle routes where this can be achieved?	Yes/No
	Check vehicle traffic routes suitable for the type and quantity of vehicles that use them	
6	Are they wide enough?	Yes/No
7	Are surfaces firm and even?	Yes/No
8	Are they free from obstructions and other hazards?	Yes/No
9	Are they well maintained?	Yes/No
	Check suitable safety features are provided where appropriate	
10	Are roadways marked where necessary?	Yes/No

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11	Are road signs present and used where necessary?	Yes/No
12	Are safety features installed such as mirrors on blind bends, road humps to reduce speed limits, barriers to keep vehicles and pedestrians apart?	Yes/No
13	Do drivers and pedestrians report at the site entrance for instructions before entering?	Yes/No

The hazards along a traffic route that should also be addressed may include:

- Bends in the road;
- Junctions;
- Fuel or chemical tanks or pipes;
- Gates or barriers;
- Overhead electricity cables;
- Unprotected edges from which vehicles could fall, or where they could become unstable, such as unfenced edges of elevated weighbridges, loading bays or excavations; anything that might collapse or be left in a dangerous condition if a vehicle hits it; or
- Anything that might catch on or dislodge a load.

General principles that should be adopted when deciding on the layout of the traffic route are as follows:

- Vehicle routes should be wide enough for the largest vehicle using them, therefore you must know the vehicle types that use your site;
- The surface must be of sound construction and able to bear the loads of the vehicles using them, thus you must also know the weights of the vehicles and the typical /maximum weights they carry;
- There should be enough space to prevent overcrowding;
- Plan routes such that they are the safest routes, avoid routes around dangerous areas and unprotected edges and structures or take additional precautions:
 - Access control and barriers should be in place in areas identified as hazardous and having significant associated risk (e.g. high voltage installations, power lines etc.) to prevent vehicles accessing hazardous areas.
 - Dangerous obstructions should be provided with goalposts, height gauge posts or barriers. Examples of height restriction and barrier access controls are presented below.



Examples of height restriction barriers; access control barrier; and barrier or vulnerable equipment

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- Consider the heights of vehicles and their loads and measure and record the vertical clearance of overhead obstructions taking into account overhanging lighting and services;
- Make sure entrances and gateways are wide enough, where possible to allow for two vehicles to pass through;
- Provide clear signs to inform drivers and pedestrians about areas where there are hazards in advance of the hazard and also at the point of the hazard. Examples of hazard warning signs are provided in Annex F.
- Keep stationary objects including parked vehicles out of the flow of the traffic;
- Provide parking areas wherever possible for all work vehicles, and private cars and bicycles. This may need to be controlled with barriers, signs and bollards etc on larger sites where there is a risk that vehicles or pedestrians may venture onto vehicle routes where they are not supposed to be;
- Forward visibility needs to be good enough to allow drivers to see and avoid hazards. There should be enough visibility at junctions and bends to allow drivers and pedestrians to see anything dangerous. Sharp bends should be avoided and where this cannot be avoided, consider measures such as mirrors to help see around corners; and
- One way systems should be considered if there is a lack of space, so that drivers can avoid the need to reverse, with drive through loading areas. Pedestrians will also know which direction vehicles are coming from.

General principles that should be adopted when deciding on the suitability of traffic routes are as follows:

- The width of the roadways should be wide enough to handle the materials being brought on and off the site;
- Roadways should be wide enough to allow vehicles to pass on-coming or parked vehicles safely;
- Entrances should be wide enough to allow two vehicles to pass without causing a blockage;
- The size and turning ability of the vehicles coming onto site should be considered as they need a certain amount of space to manoeuvre. If large goods vehicles are using the site, routes must be made wide enough for them to manoeuvre safely;
- The build quality of outdoor traffic routes should be similar to the standards for modern public highways. They should be maintained to provide good grip for vehicles or people, they should be roughened if too smooth, gritted or sanded if slippery and free from oil, grease, rubbish etc. Extra grip may be required on sloping surfaces;
- Routes including bridges etc. should be able to support the weight of vehicles and their loads;
- Structures with weight restrictions should be clearly identified. See example below:



Example of a Weight Restriction Sign

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- A steep gradient on a site can affect the driver's ability to handle the vehicle (especially if the surface is slippery), how easily spills can be contained, and how easy it is to manage wheeled objects such as waste containers, roll cages or pallet handlers. Some vehicles can become unstable on slopes. Examples include:
 - some lift trucks;
 - raised-tipper lorries;
 - raised-body tankers involved in transferring powder or bulk solids; and
 - Vehicles with a trailer containing liquids (such as a bowser or a slurry tanker), but without effective baffles to stop the liquid surging around.
- Steep slopes should be avoided especially in areas where lift trucks and other similar plant equipment operate, unless they are designed to operate on steep slopes; and
- For road tanker loading and unloading, a maximum gradient of 1 in 30 is recommended to make sure the vehicle moves as little as possible, and help to contain any spillages. Steep slopes can also make loads less stable, especially if the loads are stacked or if they are unstable anyway (for example, wire coils or reels, barrels). Take care that loads moved on slopes cannot move dangerously. Even where vehicles can safely use sloping surfaces, avoid slopes steeper than 1 in 10.

Suitable safety features should be provided on all traffic routes, this should include:

- Signs and signals should be in place to tell drivers about the routes they should take and instruct people to behave safely;
- Roadways should be marked where necessary to show traffic lanes, route edges, priority at junctions, stop lines, no parking areas, pedestrian crossings. In some countries, road signs in the workplace are legally required to be the same as those used on public roads. Drivers and pedestrians should be able to expect that the layout, signs, furniture and markings are similar to that on public roads so this is always recommended practice. Example signs for illustration purposes only are provided in Annex F; and
- If signs need to be visible in the dark, they will need to be reflective and ideally illuminated.

Limiting speed is an important way of controlling traffic. The best way to do this is to use fixed features that means drivers cannot move too quickly. Examples include speed humps, narrow routes, rumble devices etc. These measures must be clearly signed and visible as in the examples below.



Example of a speed hump sign



Example of a speed hump

Speed limits should also be used, but they need to be practicable or drivers will break them. The speed limits established should be suitable for the prevailing road conditions and pedestrian

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hazards at the operation. To decide on an appropriate limit you should measure the actual speeds that vehicles are travelling at various locations along the route. The limit you decide on should be sensible considering these speeds. It should be a safe speed but not unreasonably slow.

It is recommended that speed guns are used on-sites to verify driver speeds. This will also assist in consulting /discussions with the driver if they breach the speed limits.

Speed limit signs need to be repeated throughout the site roads and not just at the entrance depending on the size of the site and in locations where drivers need reminding.

4.2 Pedestrians

Workplace routes must be suitable for the people using them and where vehicles and pedestrians share a route there must be segregation between them. Sites should first carry out a risk assessment / review of pedestrian and vehicle interaction, including road design and layout, (entry/ exit points, intersections etc.) to determine what action to take to achieve this. An example checklist of what to look for is presented in Table 4.2 below.

Table 4.2 – Example Pedestrian Safety Checklist

	What to Look For	Yes/No
1	Lack of clearly marked and signed pedestrian routes and crossings.	Yes/No
2	Pedestrian routes blocked by vehicles or equipment.	Yes/No
3	Large numbers of pedestrians and vehicles travelling on the same route at peak periods.	Yes/No
4	Unsuitable and dangerous pedestrian routes. (e.g. Uneven surfaces)	Yes/No
5	Pedestrians being struck by vehicles because they are not seen by drivers.	Yes/No
6	Pedestrians entering dangerous and restricted areas such as turning areas and delivery bays.	Yes/No
7	Pedestrians feeling unsafe and insecure when walking to and within a site.	Yes/No
8	Locked emergency doors and gates.	Yes/No
9	Pedestrian routes that have poor drainage and are prone to flooding.	Yes/No
10	Are there safe crossing points for pedestrians?	Yes/No
11	Are noticeable shortcuts being taken?	Yes/No
12	Do footways have the appropriate signage?	Yes/No
13	Do footways have the appropriate guard rails?	Yes/No
14	Are any vehicles blocking pedestrian routes?	Yes/No
15	If the public use your site, are they separated from work traffic?	Yes/No
16	Are footways kept clear from obstructions and flooding?	Yes/No

Clearly marked, signed and segregated pedestrian routes should be in place. If both pedestrians and vehicles use the same traffic routes, the routes should be wide enough to allow vehicles to pass pedestrians safely. Barriers and clear markings or raised kerbs should be provided on pedestrian walkways where there are high pedestrian flow areas / walkways only accessible for pedestrians. Make sure that barriers don't reduce visibility below acceptable standards for road users and pedestrians. An example barriered walkway is presented below. Barriers should also be provided:

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- Where pedestrians enter and exit buildings;
- At the corner of buildings; and
- To prevent pedestrians walking straight into roads.



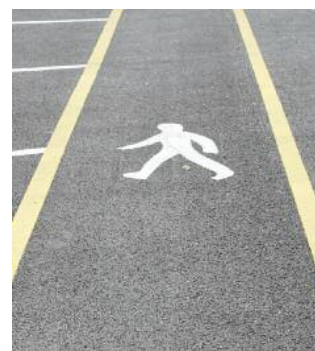
Example of a barriered walkway



Example of a barrier outside an exit.

On narrow roads you may need to introduce a one-way system with a segregated footpath rather than a two-way road. This will reduce the number of conflicting movements and help pedestrian and vehicle traffic move around site. It is advised that one-way systems run clockwise so that pedestrians are sure of where vehicles are coming from.

Appropriate crossing points should be provided for pedestrians to cross vehicle routes: Road crossing points for pedestrians should be clearly marked out and signed. Where traffic flows do not provide adequate gaps in the traffic for pedestrians to cross, consider using traffic lights and zebra crossings. The positioning of pedestrian crossing points should be considered carefully. You should make sure that all users have adequate visibility and the most direct possible pedestrian route is used. Barriers, guardrails or deterrent paving should be provided to direct pedestrians to designated crossing points and to prevent them crossing in unsafe places. Crossing warning signs shall be in place, examples are provided below:



Examples of pedestrian crossings

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An example of a typical warning sign to show that pedestrians are crossing is presented below:



Example of pedestrian crossing warning sign

On buildings you should provide separate vehicle and pedestrian doorways wherever possible, and provide windows so drivers and pedestrians can see what is approaching. Keep vehicle routes far enough away from doors or gates that pedestrians use or from pedestrian routes that lead on to them, so that the safety of pedestrians is not threatened.

High visibility clothing may be required in some areas. Pedestrians should only work in areas where vehicles are turning or making deliveries when absolutely necessary. In such cases, provide pedestrians with high-visibility clothing to help them be seen more easily. It may be necessary for all people walking on site to wear high-visibility clothing. Drivers should wear high visibility clothing when working directly outside or near to moving vehicles. It also applies to quarries and mine sites and mobile equipment. It should comply with the requirements for day and night use (i.e. be a combination of fluorescent and retro-reflective material). Pedestrians should also wear appropriate footwear and personal protective equipment (PPE).

Pedestrians should always be kept away from areas where vehicles are working unless they need to be there e.g. quarry and mine workings, drivers should be not allowed to get out of their vehicles beyond a certain point to make sure they are safe where large surface mine vehicles are working.

All visiting pedestrians and drivers should report to a site office and there should be site procedures and policies in place. Pedestrians should be encouraged to take extra care by walking in single file and on one side, facing vehicles coming in the opposite direction, so that they can be easily seen. Instructions for pedestrian and right of way rules should be in place. An example set of rules are:

Pedestrians

- Always follow the pedestrian walkways and crossings and use site signage.
- Before crossing 'crossing points' ensure that plant operators have seen you.
- Report any problems with the walkways to site management.
- Do not block or restrict walkways in any way with materials, trip hazards.
- Do not work within the walkway; if your works require you to work within the walkway see site management to ensure alternative arrangements are made.

Plant and Machinery Operators

- Give way to pedestrians at crossing points.
- Ensure all mirrors, cameras, beacons, lights and audible devices are functional, if not report them immediately.

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- Comply with site signage and speed limits.
- Ensure all reversing is under the direction of a banksman.
- Limit the amount of reversing required.
- Never block or restrict walkways in any way with materials or the machine itself.

5. SAFE VEHICLES

5.1 Selection and Acceptance Criteria of the Fleet

The selection and maintenance of fleet vehicles and associated equipment is key to safe vehicle operations and work-related driver safety. Operations should prepare and document a specific fleet management plan which sets out how the business will manage its vehicle fleet (owned, hired or leased) as specified below.

Health and safety should be considered when selecting fleet vehicles as it is essential that they are suitable and safe for the job which they are required to do. Vedanta operations should therefore define and document a specification and acceptance criteria and a list of the permitted new and/or used vehicle fleet (including company owned and third party owned cars, commercial and industrial vehicles) taking into account the tasks and application of the vehicle and the materials it is intended to carry. The following needs to be considered when establishing criteria: Specification and selection criteria should consider and include:

- Vehicle and equipment purpose and environment of intended use, and an evaluation of whether it is appropriate for the role. The evaluation of appropriateness should include a consideration of; primary purpose of the vehicle (e.g., on-road passenger vehicle, off-road passenger vehicle, field vehicles, haulage), the typical area of usage (e.g., urban, sealed roads, off-road), and maintenance requirements.
- Establishment of minimum safety requirements for each vehicle type and associated ancillary equipment. Where available, accredited safety rating systems (e.g. ENCAP) should be used to establish minimum safety characteristics of candidate vehicles. On-road vehicles in particular should be sought with a superior safety rating. The Euro NCAP is a voluntary vehicle safety rating system which originated in the UK but is now backed by the European Commission and if there are no country or regional specific standards, this should be used as a basis. Other areas with similar (but not identical) programmes include Australia and New Zealand with ANCAP, Latin America with Latin NCAP and China with C-NCAP. NCAP generally publishes safety reports on new cars, and awards 'star ratings' based on the performance of the vehicles in a variety of crash tests, including front, side and pole impacts, and impacts with pedestrians. The top overall rating is five stars.
- Additional suggested minimum safety standards are presented in the following table.

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M – Suggested Minimum requirement R - Recommended HR - Highly recommended

FEATURE	On-road light vehicles	Off-road light vehicles	Heavy Goods vehicles (> 3.5 tonnes)	Special purpose
Four point harness for all occupants	-	-	-	HR
Three point seat belts for all occupants	M	M	M	M
Head restraints for all occupants	M	HR	HR	HR
Supplemental Restraint System (SRS) airbags – driver*	M	M	M	-
SRS airbags - front passenger*	M	HR	HR	-
ABS	M	HR	M	-
Internal cargo barrier (passenger cars)	M	M	-	-
Roll-over protection: engineered to protect occupants in the event of a roll over (without significant impact on usability of vehicle).	-	M	R	M
High visibility colour	HR	HR	HR	-
Cargo barrier for external loads				
Engineered to prevent loads entering cab area during an accident.	-	M	M	-
Isolation devices	M	M	M	M
Dual battery system (or other battery protection or back-up system)	-	HR	HR	HR
Emergency communications system (mobile phones may be appropriate for on-road applications)	M	M	M	M
Alert systems (e.g., seat belt reminders, over-speed indicators)	HR	HR	HR	R
Stability control features	R	R	R	-
Daylight running lights	HR	HR	HR	HR
First aid kit	M	M	M	M
Tool kit and vehicle spare parts (bulbs, fuses etc)	M	M	M	M
Reverse warning buzzers	R	M	M	HR
Wheel Chocks	-	-	M	HR
Side and roll over airbags	R	R	-	-
Tacograph	-	-	M	-
Rated vehicle recovery points	-	M	M	M

*Ancillary equipment such as bush bars, bull bars and front mounted winches should all be compatible with the SRS. Where minimum requirements cannot be met (e.g. with contractor vehicles or in countries with limited vehicle options) then a risk assessment should identify whether increased risks can be adequately managed by alternate means. Once these are met, other safety features should be taken into consideration when selecting between alternative vehicle types with the objective of maximising safety as follows.

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- **Load**- the make and model selected should take into account capability of carrying the intended load in terms of weight and size, especially for light off-road vehicles where it is easy to add features such as protective bar work, water tanks, long range fuel tanks, communication equipment, winches, dual batteries, recovery gear and comprehensive tool kits that leave the vehicle with no or limited capacity for a working load. In addition, the capacity of vehicles that may be required to tow certain equipment should be addressed and any load bearing equipment (e.g. winch mounts or recovery points) should be certified as appropriate for expected loading. Tow bars and towed equipment should be subject to proper assessment for suitability and safety;
- **Shelving and fixtures** - where required, the configuration of shelving and other fixtures for safely transporting equipment and materials and / or special equipment and fittings to help with lifting loads and then securing them safely during transport;
- **Tyres** - operations business should consider compatibility across the fleet;
- **Ergonomics** - considerations such as seat adjustability, access, visibility, etc., especially where long distance drives on poor roads may have serious impacts on well-being if seats are inadequate (see below, drivers should also be given guidance on how to set their seat correctly);
- **Visibility of vehicle** - vehicles should be brightly coloured or have hazard warnings displayed if they are working near busy roads or near pedestrians.
- **Visibility considerations** – is additional visibility required such as CCTV, additional mirrors.
- **Speed limiters**- should be considered for commercial vehicles on and off-road;
- **Servicing** –the capacity to effectively service the vehicle(s) either in-house or via appropriate service providers is required;
- **Sustainability** (with regard to fuel usage, emissions, disposal/recyclability) - where possible, operations should select vehicles that best meet Vedanta's sustainability objectives. This means that factors such as fuel consumption and emissions should be considered during selection. It is recognised that there may be limited options for many vehicle classes, but it may be possible to discriminate on-road vehicle candidates on these grounds. This could include a maximum acceptable level of CO₂ emission, fuel type and environmental impact of different fuels.

Operations should define a process for the fleet to be continually upgraded as vehicles pass an agreed age or mileage threshold. This will allow improvements to be gradually introduced to the fleet as vehicle design improves.

The selection of vehicles and any modification shall be subject to change management processes as outlined in the Vedanta Management Standard MS07 on *Management of Change*. Any modifications to the specification of vehicles should be undertaken by competent providers and should not compromise the safe operation of the vehicle; for instance, internal roll over protection should not significantly impair visibility for the driver or present a hazard to passengers.

5.2 Mine Operations – fleet safety requirements.

Surface Mobile Equipment

Mining operations surface mobile fleet has the potential to result in fatal and high injury potential incidents, thus in addition to the above there are specific recommendations on surface vehicles used on mines. These apply to surface mobile equipment such as rear dump, belly dump and water trucks, graders, dozers, low loaders etc. It is recommended that equipment has the following safety specifications:

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- Seat belts for all occupants;
- Adequate lighting (e.g. headlights, tail, turn, brake, strobe, flashing lights)
- Adequate walkways, railings, steps/grab handle combinations and boarding facilities, including an alternative method of disembarking in case of emergency.
- Collision avoidance technology or procedures;
- Reversing alarms;
- Chock blocks for rubber-tired surface mobile equipment;
- Horn;
- Windscreen wipers;
- Guarding on moving parts;
- Signage that allows easy identification from a distance;
- Security to prevent unauthorised operations.

Other recommended safety specifications should be adopted but a risk based approach can be used to determine necessity for each vehicle type.

- Approved or certified roll over protection (ROP);
- Fail to safe brakes;
- Fire detection and suppression capable of being activated from the ground and the cabin;
- Non-hand-held two way radios or other communication.
- Falling object protection (FOP);
- Air conditioned cabins, with consideration of noise and dust systems and suitable protective glass.
- A method for transporting supplies and personal items (e.g. back-pack) to allow operators to maintain three points of contact whilst embarking and disembarking.
- Safety checks, supports, interlocks etc. to be used when working on the machine.

Seat belts should be in use by all occupants.

Underground Mobile Equipment

Mobile equipment used underground has the potential to result in fatal and high injury potential incidents, thus in addition to the above there are specific recommendations on underground vehicles used on mines. These apply to surface mobile equipment such as rail bound locomotives, load-haul-dump equipment (“scoops” etc.), multi-purpose vehicles, graders and other similar equipment with a machine-mounted operator. Unless justified on the basis of risk assessment, it is recommended that underground mobile equipment has the following minimum safety specifications:

- Falling object protection system (e.g. canopy or cab structure).
- Automatic reversing alarm for non-track and track bound machinery (except for bi-directional machines, which shall be fitted with an automatic system to indicate direction of travel e.g. alternating light system).
- Flashing light/s mounted on personnel transport equipment and underground light vehicles;
- Seat belts and/or passenger restraints.
- Fail to safe brakes, (excluding underground light vehicles with emergency brakes), train brake systems the design of which is based on a risk assessment that considers runaway trains, decoupling etc.

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- With the exception of electrically operated equipment, for which a risk-based approach shall be used, a combined automatic and manual fire suppression system, in addition to a portable fire extinguisher.
- Restricted area and/or pinch point access controls or guarding where practicable (e.g. articulation locks for all articulated equipment, coupling devices for trains, with the locking mechanism able to be applied from a position of safety).
- Speed limiting device (the specific design requirements for this system should be determined by risk assessment).
- Appropriately specified collision avoidance technology and /or procedures.

5.3 Routine Maintenance and Repairs

Vehicles should always be maintained in a safe and fit condition therefore once vehicles are purchased or leased or hired from a third party, it is essential to have procedures in place for routine maintenance and servicing, inspections and roadworthiness.

A planned programme, including daily and weekly checks by the driver and planned maintenance should be established that meets the specific requirements of the work environment and the vehicle manufacturer's guidelines as follows.

- All vehicles used on company business should be maintained, inspected and tested according to the manufacturer's recommendations and national, state or provincial law. Inspection and maintenance schedules should be established that ensure thorough examination and servicing of every vehicle by competent persons on an agreed basis that reflects the reality of vehicle usage e.g. if vehicles are regularly used on rough surfaces, or for very high mileage, this may be more frequent than recommended by the manufacturer. Particular attention should be paid to:
 - The braking system;
 - The steering system;
 - Tyres;
 - Mirrors and fittings;
 - Windscreen, washers and wipers, warning devices, such as horns, reversing alarms or lights;
 - Ladders and steps, walkways or parts that support people;
 - Pipes and pneumatic systems or hydraulic hoses, rams, outriggers, lifting systems or other moving parts;
 - Fire deluge/extinguishing systems.
 - Specific safety systems, e.g. interlocks, racking, securing points, ropes etc.
- Inspection and maintenance could be managed by a competent third party on Vedanta's behalf/ or designated internal qualified competent person. These third parties should be subject to contractor approval and management processes in accordance with the Vedanta Technical Standard TS06 on *Supplier and Contractor Management*.
- Where operations undertake their own maintenance (e.g. in on-site garages/workshops manned by qualified vehicle mechanics) a formal documented inspection and preventative/condition based maintenance system should be in place to ensure that vehicles are maintained in a safe and roadworthy condition. An example in house maintenance checklist is presented in Annex B. Operations should consider a system of independent monitoring of at least a proportion of vehicles to ensure quality of the work carried out (e.g. 5-10%);
- Quality replacement parts should always be used, particularly for safety critical elements such as brakes and tyres. The durability of these parts and vehicle defects should be monitored and trends should be identified.

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- Servicing and repair records should be comprehensively maintained as it is essential that operations can demonstrate that everything has been done to maintain vehicles in a safe condition (e.g. in the event of an accident). Log books should be maintained in the vehicles;
- Drivers of vehicles should be instructed that they also have a responsibility in relation to the condition of the vehicle they are driving. In some countries, the moment a driver takes a vehicle on to a public road they become responsible for its condition and roadworthiness, regardless of whether they own the vehicle, or if they have a responsibility to maintain it. Vedanta businesses should therefore have the co-operation of its drivers to assist in the maintenance of roadworthiness of the vehicle fleet. To achieve this, in addition to routine servicing and maintenance, Vedanta operations should require drivers to perform necessary basic vehicle checks. It must be ensured that drivers are competent to do this e.g. through instruction or training. Checks should include:
 - Pre-use checks - a pre-use vehicle safety check and familiarisation system example in Annex B. Periodic basic condition checks such as checking the oil and the tyre pressure and examining the tyres for signs of wear and defects, checking safety and emergency equipment.
 - Routine upkeep tasks, such as topping up the windscreen washer fluid
- The system for reporting defects should be very clearly set out and drivers should also be instructed that they are responsible for promptly addressing and reporting any defects before driving the vehicle.

Anyone driving their own car on company business should be responsible for arranging their own car maintenance and insurance.

5.4 Vehicle Loading

Loading and unloading can be dangerous. Machinery used for loading and unloading can seriously hurt people. Heavy loads, moving or overturning vehicles and working at height can all lead to injuries or death. Operations should develop safe loading procedures using this guidance that take into account:

- The total permitted weight of loads according to national or local legislation;
- Stability and security of the load;
- Procedures for preventing drivers from leaving docks and stations until vehicles are safe to move (dock locks, wheel blocks, key control etc.); and
- Prevention of falls from loading activities for example when sheeting or securing loads to vehicles or on top of vehicles.

Loading and unloading areas should be:

- Clear of other traffic, pedestrians and people not involved in loading or unloading;
- Clear of overhead electric cables so there is no chance of touching them, or of electricity jumping to 'earth' through machinery, loads or people;
- Level. To maintain stability, trailers in particular should be parked on firm level ground;
- Loads should be spread as evenly as possible, during both loading and unloading. Uneven loads can make the vehicle or trailer unstable;
- Loads should be secured, or arranged so that they do not slide around. Racking may help stability;
- Safety equipment must be considered. Mechanical equipment and heavy moving loads are dangerous:

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- Guards or skirting plates may be necessary if there is a risk of anything being caught in machinery (for example dock levellers or vehicle tail lifts). There may be other mechanical dangers and safety procedures to be considered.
- Ensure the vehicle or trailer has its brakes applied and all stabilisers are used. The vehicle should be as stable as possible;
- In some workplaces it may be possible to install a harness system to protect people working at height. Provide a safe place where drivers can wait if they are not involved in the unloading. Drivers should not remain in their cabs if this can be avoided. No-one should be in the loading/unloading area if they are not needed;
- Vehicles must never be overloaded. Overloaded vehicles can become unstable, difficult to steer or be less able to brake;
- Always check the floor or deck of the loading area before loading to make sure it is safe. Look out for debris, broken boarding, etc.;
- Loading should allow for safe unloading. Loads must be suitably packaged. When pallets are used, the driver needs to check that:
 - They are in good condition
 - Loads are properly secured to them.
 - Loads are safe on the vehicle. They may need to be securely attached to make sure they cannot fall off.
- Tailgates and sideboards must be closed when possible. If over-hang cannot be avoided, it must be kept to a minimum. The over-hanging part of the load must be clearly marked;
- If more than one company is involved, operations should agree in advance how loading and unloading will happen. For example, if visiting drivers unload their vehicles themselves, they must receive the necessary instructions, equipment and co-operation for safe unloading. Arrangements will need to be agreed in advance between the haulier and the recipient;
- Some goods are difficult to secure during transport. Hauliers and recipients will need to exchange information about loads in advance so that they can agree safe unloading procedures;
- Checks must be made before unloading to make sure loads have not shifted during transit, and are not likely to move or fall when restraints are removed. Make sure drivers and site staff know what to do if a load appears to have shifted in transit;
- There must be safeguards against drivers accidentally driving away too early. This does happen, and is extremely dangerous. Measures could include:
 - Traffic lights.
 - The use of vehicle or trailer restraints.
 - The person in charge of loading or unloading could keep hold of the vehicle keys or paperwork until it is safe for the vehicle to be moved.
- These safeguards would be especially effective where there could be communication problems, for example where foreign drivers are involved;
- Where possible, present the side of the vehicle with easiest access to the workplace;
- Where possible, lay the site out so that reversing is unnecessary; where reversing is unavoidable, make it as safe as possible, and consider using a competent and authorised signaller (banksman) with appropriate high-visibility equipment;
- If articulated vehicles are being coupled or uncoupled, check that drivers know how to park them. Make sure drivers understand the correct use of parking and hand brakes, and that they use them;
- Make sure drivers receive adequate safety information for each delivery or collection beforehand, such as restrictions on the type of vehicle the site can handle, or problems such as one-way systems or low bridges. If possible, provide a site plan including parking, location of reception, route through the site, location of unloading areas, driver waiting

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areas, and written information on procedures for visiting drivers (e.g. wearing high-visibility vests, limits on mobile phone use, prohibitions or special conditions for reversing such as using a banksman); and

- If you receive deliveries, consider giving responsibility for authorising unloading to a specific employee who will be present during the process. They should have the authority to refuse or halt unloading if there are safety problems, and should be confident that a decision to refuse delivery will be supported by management.

5.5 Vehicle Breakdowns and Safety and Emergency Equipment

Preventing Breakdowns

Operations should prevent breakdowns in the first instance. To prevent breakdowns, operations must maintain vehicles to a high standard, carry out regular checks, and keep defective vehicles off the road (see Section 5.2 above on Vehicle Maintenance) – not only are well maintained vehicles less likely to break down, but some breakdown recovery services (see below) may charge extra for recovery of vehicles broken down due to poor maintenance. Ensure there is a clear vehicle handbook in every vehicle. Provide tyre tread gauges and safety equipment for all drivers (see below re safety equipment). If possible, ensure you have a vehicle hire service available for rapid replacement of vehicles that cannot be repaired on the spot.

Provide Breakdown Cover

Breakdown cover can be managed in-house or outsourced to a specialist vehicle recovery or broader fleet management service. Shop around for the package that best suits your requirements. You should consider:

- types of vehicle covered;
- response times;
- provision for passengers;
- level of cover e.g. recovery only, roadside assistance, starting from your operational base(s);
- onward travel or accommodation services (if a vehicle cannot be repaired);
- replacement vehicle services;
- payment schemes (annual fee versus 'Pay for Use');
- incident management – e.g. help with insurance claims;
- testimonials and references from other customers;
- industry awards; and
- Limitations of cover in relation to abnormal loads / gross vehicle weight (GVW) in the case of heavy goods vehicles.

Safety and Emergency Equipment

Depending on national requirements, the nature of the work and an assessment of risk, Vedanta operations should provide safety equipment for regular use and for use in an emergency or breakdown in company owned and hired vehicles. Vehicles should be provided with an accident kit, including items such as:

- First aid kit;
- Pen and paper;
- Mobile Phone;
- Map;

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- Disposable camera;
- Torch/flashlight;
- Fire extinguisher;
- Warning triangle;
- Spare wheel, jack, pump etc;
- Spare screen wash and engine oil;
- Hi visibility vests (something commercial vehicle drivers tend to carry as standard, but which should be carried by all drivers),;
- Equipment for dealing with winter conditions (where appropriate) e.g. ice shovel, de-icer;
- Water (in hot climates);
- Emergency food; and
- Emergency blankets, sturdy shoes or wellington boots.



Example of an Emergency Warning Triangle

Information about this equipment and its use should be communicated to drivers, for example through tool box talks and/or in a driver's handbook or procedures. Information about what to do in the event of a breakdown should also be provided – See Annex D for Example Driver Advice during breakdowns.

Drivers should use safety and emergency equipment as required by law or specified by the Vedanta operations.

Where vehicles are driven outside of the home country, employees should be informed to check before they leave whether local law in the foreign country requires them to carry any additional safety and emergency items.

Drivers should be instructed to check these items regularly so that they are guaranteed to be intact should they be needed. In addition, periodic inspections and audits should include checking the presence and condition of this safety and emergency equipment.

5.6 Seatbelts

Operations should ensure that all vehicles and mobile equipment have seatbelts as defined by the selection criteria i.e. do not purchase or lease vehicles without seatbelts (see Section 5.1 above). If vehicles do not come with seatbelts, these can be retrofitted. In addition, the wearing of seatbelts should be made compulsory at all times when a vehicle is in use and the engine is running. Operations should have policies and disciplinary procedures in place for the non-wearing of seatbelts (liaise with Human Resources for disciplinary procedures). An example seatbelt policy is presented in Annex C.

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Taxis and buses/coaches should only be used when no suitable alternative exists.

5.7 Parking / Backings

Operations should prevent collisions from parking & reversing operations. Where possible, you should provide parking areas for all vehicles using the workplace – work-related vehicles private cars, motorcycles and pedal cycles. Parking areas should be in safe and suitable places.

Controls

Controlled parking areas might be appropriate wherever uncontrolled parking might pose a risk to safety, for example by:

- narrowing routes;
- blocking sight lines; and
- forcing pedestrians on to vehicle routes.

On some sites (for example, larger industrial complexes) it may be appropriate to control parking across the whole site. When drivers enter a controlled parking area, you need to tell them clearly that they may only park in allowed places; and how they can recognize these areas. Where parking is controlled throughout the site, give this information at the site entrance.

Segregation

Keep people and vehicles apart in and around parking areas by using pedestrian and vehicle exclusion areas.

If possible, drivers leaving parked vehicles should not have to cross potentially dangerous work areas or traffic routes.

Physical precautions such as bollards and retractable barriers can help to prevent vehicles from crossing into walking areas and improve safety for pedestrians.

Parking areas

Parking areas should:

- be clearly signposted;
- be firm;
- be level;
- be well drained;
- not be slippery;
- be well lit (if possible); and
- be as close as possible to where people need to go when they leave their vehicles (for example, refreshment facilities for visiting drivers).

The type of parking area will depend on the vehicles used at the workplace (including visiting vehicles), where they go and what they are used for.

An alternative to parking 'lots' might be bays or lay-bys, offset from the flow of traffic and people, where vehicles can be left safely. These should also be firm, level, well lit and clearly marked.

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Where vehicles have to be parked on a slope, they should:

- be parked facing up or down the slope, never sideways on.
- have their brakes applied
- be left in gear (when it is safe to do so).
- wheel-chocks must be used when necessary.

Drivers must NEVER leave their vehicles without making sure that the vehicle and its trailer are securely braked.

Manoeuvring

Wherever possible, parking areas should be designed so that only simple manoeuvres are needed for vehicles to park and leave. Always try to avoid the need for reversing, and also think about how articulated and other large vehicles will be able to use the space safely. If a driver needs to move the load area of their vehicle close to a structure, reversing will often be unavoidable.

However, parking areas can often be arranged in drive-through patterns. If you cannot have drive-through parking, arrangements should encourage reverse parking that:

- reduces the number of vehicles reversing out into a flow of traffic;
- improves visibility for departing vehicles.

Arranging parking bays at an angle backwards to the flow of traffic is a good way of encouraging reverse parking.

Enforcement

You may need a wheel-clamping scheme (where wheel clamping is legal) or other measures to enforce parking restrictions on some sites. Use these measures if somebody parks where they are not supposed to, to make sure the schemes are effective.

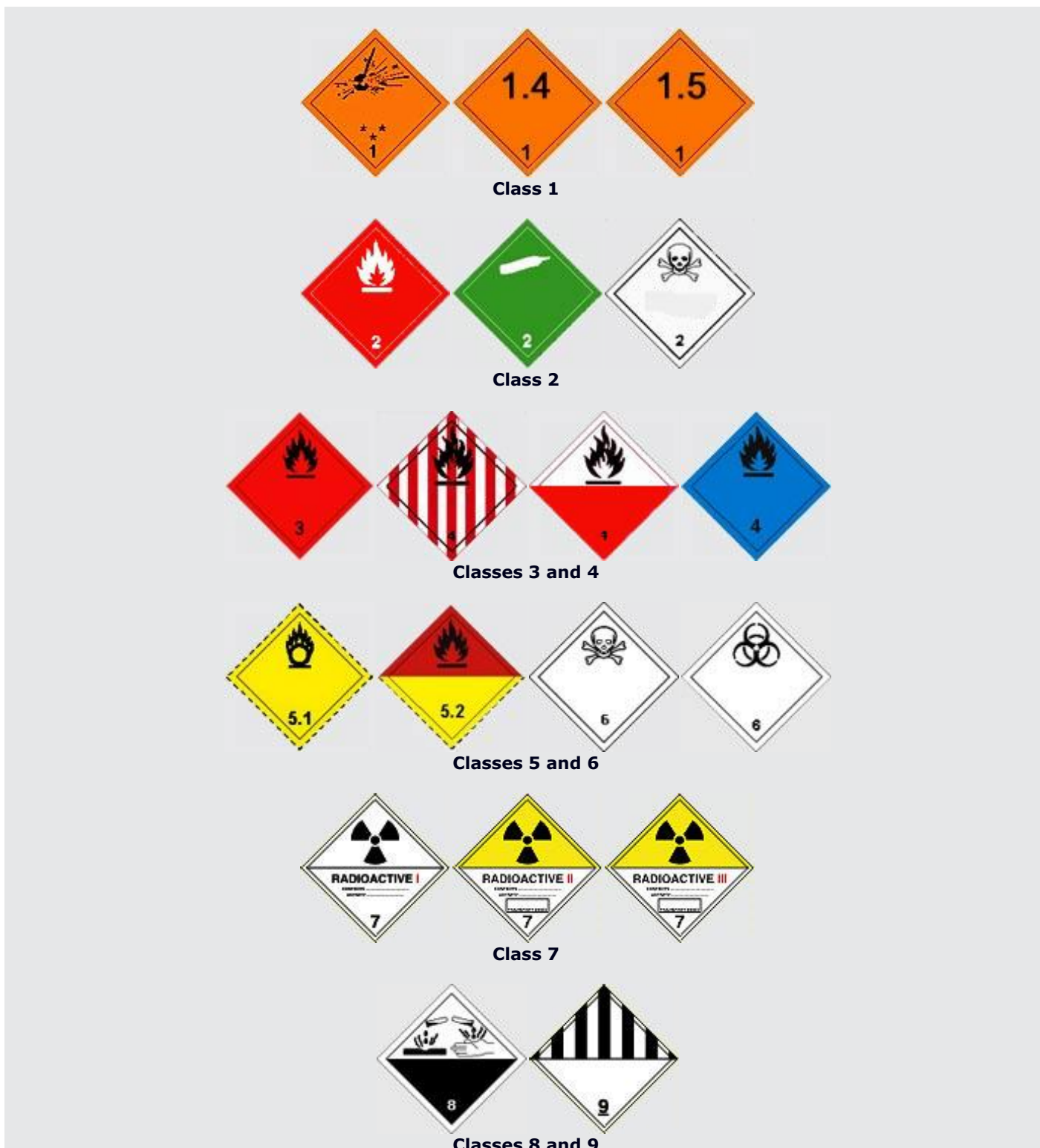
If parking is a significant problem, a full survey of parking demand and availability might be appropriate. You may want to consult professional engineers to conduct such a survey.

5.8 Identification of Vehicles Carrying Hazardous Materials

Carrying goods by road or rail involves the risk of traffic accidents. If the goods are dangerous, there is also the risk of incidents, such as spillage, leading to hazards such as fire, explosion, chemical burn or environmental damage. Most goods are not considered sufficiently dangerous to require special precautions during carriage. Some goods, however, have properties which mean they are potentially dangerous if carried. Dangerous goods are liquid or solid substances and articles containing them that have been tested and assessed against internationally-agreed criteria - a process called classification - and found to be potentially dangerous (hazardous) when carried. Dangerous goods are assigned to different Classes depending on their predominant hazard. The carriage of dangerous goods by road or rail is regulated internationally by agreements and, for example, in Europe by European Directives including packing and signage. Operations must comply with these regulations – external advice may be required as this is a very complex field and all materials require classification before labeling can occur.

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Laid out below are the UN Hazard classes and danger signs. To find out what each Class number is and what each sign represents, please refer to the list below the signs.



1 UN Hazard Classes

Class

Hazard Class Information

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Number	
Class 1	Explosive
1.1	Substances with a mass explosion hazard
1.2	Substances which present a projection hazard but no mass explosion hazard
1.3	Substances which present both a fire hazard and a minor blast or projection hazard (or both) but not a mass explosion hazard
1.4	No significant hazard
1.5	Very insensitive substances with a mass explosion hazard
1.6	Very insensitive articles with no mass explosion hazard
Class 2	Gases
2.1	Flammable gases
2.2	Non-flammable, non-toxic gases
2.3	Toxic gases
Class 3	Flammable liquids
Class 4	Flammable solids
Class 4.1	Flammable solids, self-reactive substances and solid desensitised explosives
Class 4.2	Materials liable to spontaneous combustion
Class 4.3	Substances which, in contact with water, release flammable gases
Class 5	Oxidizing substances and organic peroxides
Class 5.1	Oxidizing agents
Class 5.2	Organic peroxides
Class 6	Toxic and infectious substances
Class 6.1	Toxic substances
Class 6.2	Infectious substances
Class 7	Radioactive substances and articles
Class 8	Corrosive substances

5.9 Legal Declarations of Roadworthiness

In some countries, there is a legal requirement for vehicles over a certain age to be inspected, tested and certified as roadworthy, typically once a year. Where applicable to Vedanta operations, a system should be in place to ensure this is undertaken, that relevant in-date certificates are held and that vehicles are re-certified in a timely manner. Vehicles should never be driven without the relevant certificates in place.

5.10 Insurance

All Vedanta vehicles must have relevant insurance in the country in which they are operated for the use and type of vehicle e.g. HGVs, light goods, cars. In some countries, people who drive their own car on company business must inform their insurance company and take out special cover for 'business use'. Where this is needed, managers must check each year that suitable insurance cover is in place for each driver.

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6. SAFE DRIVERS

6.1 General

Perhaps the single most critical safety element in fleet management and work-related driving safety is the driver. As with procurement of vehicles, health and safety applies from the recruitment stage for new employees, as they may drive on company business from the first day they are hired. Drivers must be physically, mentally and emotionally fit; competent and qualified to drive and insured to drive on Vedanta business. This involves checking such aspects as driving licences, motoring histories, sight tests, medical conditions and a pre-employment driving assessment. These are all checks that might appear to be time consuming at the time of recruitment but they could avoid far more expensive and time consuming work later on, and serious or fatal driving accidents. Operations should identify all roles that require (1) driving on company business as a main role or (2) driving on company business, but which is not their main role, as different requirements apply.

6.2 Competence, Training and Awareness

Vedanta businesses must ensure that everyone who drives on company business is competent and legally qualified to do so. Procedures should therefore be in place to ensure drivers are competent to operate the type of vehicle they are being required to drive, in its intended environment. This shall include recruitment processes, including checks on previous experience and qualifications (where appropriate), induction processes and training or assessment by the Vedanta operations (see below).

6.2.1 Competency on Recruitment

Recruitment procedures should include an assessment of driving ability, knowledge of the rules of the road (in the country in which they are driving) and driving history, including accidents and motoring offences.

6.2.2 Checks on Driving Licenses and Qualifications

The driving licence is the principal means by which Vedanta can establish whether an employee has met the national or state requirements for driving competency. However, in developing countries, drivers may not have formal qualifications in this regard; therefore Vedanta operations must undertake their own driver assessment before employing drivers (see below). In countries where formal driving qualifications and licenses are applicable, Vedanta businesses should develop a system to check driving licences to establish competence, and to see what types, weights and categories of vehicle the employee is entitled to drive and compare this with their proposed role, before they are employed. E.g. do drivers possess the necessary licences or certificates for the vehicles they are authorised to drive (e.g. FLT's, shunt vehicles, site dumpers etc.).

Periodic licence checks should also be carried out with the issuing agency (where such checks are available). If mandate licence checks are not available, driving licences should be re-examined by requesting the employee to produce a copy of it on a regular basis. License checks should be undertaken as a guide:

- At least every 12 months, for company cars or other company vehicles; and

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- At least every 12 months, for other employees who use their own car on company business.

Employees should always give permission for Vedanta to do this by for example, completing and signing a form or documents specifically developed for this purpose.

In addition to the above, line managers must make sure that people working for them directly have a valid driver's licence before allowing them to drive on Vedanta business; this can be achieved by making regular checks during audits and inspections or occasional spot checks (see below re company driving licenses).

If possible, depending on the country of operation, Vedanta businesses should sign up to receive automatic notifications of any driving offences for anyone driving a company car or vehicle.

Employees must not be permitted to drive on business for Vedanta unless these checks are up-to-date and recorded.

6.2.3 Driver Assessment and Training and Awareness

Vedanta operations should aim to make appropriate driver training available to everyone who drives as part of their job whether it is their main role or otherwise. Training can help drivers to avoid making lapses, mistakes and violations. It can help them better anticipate and cope with the unexpected, including the errors of other road users.

Training may be practical, theoretical or behavioural. It may use a range of learning methods, including computer based training and on-road training. Drivers are not all the same and their accident risk varies depending on the amount and type of driving they do, their vehicles, their driving skills and attitudes, age, gender and personal characteristics etc. Operations should therefore assess driver competencies and undertake training needs analysis and develop training programmes in accordance with driver risk.

Driver Assessment

Driver assessment should be undertaken for any drivers to be employed in those countries where no formal qualifications are available. In addition, driver assessment should be undertaken on an on-going basis, dependent on driver risk.

There are several options for assessing drivers which can be conducted by Vedanta operations or by external organisations. Types of assessment include:

- **In vehicle assessments** – involves a driver with a professional or trainer who assesses their driving. The assessor then produces a report analysing the driving of the employee and areas for improvement. Such providers would typically categorise individuals as high, medium or low risk drivers. It may not be practicable to put everyone through an in-vehicle assessment and there are other forms of assessment that can be used as below.
- **Paper** – driver questionnaire to gather information about types of driving undertaken, accidents, violations etc and whether they understand basis signage, rules of the road.;
- **On-line** - there are a number of driver training providers that provide driver assessment tools on-line or on CD. These may include knowledge tests, assessing knowledge of rules of the road; psychometric profiling tests to determine the type of work drivers do, attitudes etc., which may prioritise drivers as high, med and low;
- **Driving simulator software** – staff view real or virtual scenarios on a computer and register hazards or bad driving as they spot them. This may be more appropriate in developing countries if drivers cannot read; and

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- It is recommended to use simulators for periodic training to the drivers as a part of fleet management training
- It is recommended to use simulators to provide initial & periodic trainings to operators for mine vehicles
- By using simulators skill mapping of operators - company owned vehicles / trucks (mines/ smelters) can be done.

Driver Training and Awareness

Once assessment has taken place, operations should now be in a position to provide targeted cost effective and appropriate training, using the principle that those who are at more risk should receive training first, and prioritisation of on-road training for drivers who fulfil certain criteria, for example someone who:

- Drives a company vehicle or car for the first time;
- Changes from a smaller commercial vehicle to a larger one;
- Drives a defined number of miles or more per year on company business;
- Has held a driving licence for less than two years;
- Has not driven any vehicle for a defined time;
- Is returning to driving following a driving ban;
- Is seconded from another country; and/or
- Has had a defined number of accidents in a specified time period, including severe collisions.

Training and awareness must meet or exceed the requirements of national law and all employees, including managers, need to understand that the organisation expects them to drive within the law, safely and responsibly on all work journeys. Training should therefore include:

- **Induction Training** - There should be formal induction training for all drivers, which sets out the rules and requirements specific to the job requirement and task. Drivers also need to understand their responsibilities for their own driving activities. The induction training should cover such topics as:
 - Basic legislation about safe driving e.g. in regard to seat belts;
 - The main causes of road crashes related to poor driving;
 - Increased accident risk of poor driving;
 - Potential impact of health, fatigue and distractions;
 - Potential consequences to themselves and others;
 - Vedanta's expectations and policy on driving such as mobile phone use and driving hours, alcohol and drug use (including for medicinal purposes);
 - Hazard identification and management (driving to conditions; eliminating driving distractions);
 - Monitoring to be undertaken, to include annual driver assessments by trained assessors and vehicle tracking systems;
 - Passenger obligations and behaviours.
 - What to do in the event of a breakdown; and
 - Basic routine vehicle checks to be undertaken (See Section 4.2).
- **Formal training** - all Vedanta drivers should complete a skills development programme which is designed to meet their risk profile to include, but not be limited to:
 - Awareness sessions – sessions or workshops which cover defensive driving, traffic laws etc.;

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- Fleet driver training/defensive driving – educational and practical driving sessions to teach defensive driving and hazard perception, driving for specific behaviours and styles;
 - Country familiarisation – staff from overseas who may not be familiar with the roads, traffic laws and driving habits;
 - Driving tests – specialist driving tests for specific vehicles (e.g. heavy Goods vehicles);
 - Advanced driver training;
 - E-Learning (more suitable for low and medium risk drivers);
 - 4WD and vehicle recovery training (where applicable);
 - Environment-specific training (e.g. snow and ice environment; mountains);
 - Specific vehicle type/model training (e.g. 4WD, light truck, SPV);
 - Tyre maintenance;
 - Loading and towing (where applicable); and
 - Ancillary equipment (e.g. winches, vehicle mounted cranes, communications).
- **Periodic Refresher Training and Assessment** – It is essential to foster a culture of safe behaviour amongst drivers by occasional follow up of the instruction given at induction or initial training. Refresher training should therefore be provided at regular intervals to ensure good driving habits are maintained, new skills are learned, new issues are identified (task changes etc) and for re-assessment of abilities e.g. once per year to once every 3 years. The frequency of refresher training should be defined by the Vedanta operation based on risk, but should be done:
 - When any aspect of the driver's performance (knowledge, skill or attitude) does not meet current requirements or specifications;
 - When an aspect of the driver's job is about to change (e.g. promotion, new duties, new type of vehicle, new procedures, or a change in layout and environment);
 - After an accident or violation, which should trigger where practicable an investigation to determine attitude and skills and whether action, such as re-training is required;
 - Following an adverse report from another employee or from the public etc.; and
 - Following an illness or accident – employees returning to work following a serious illness /accident may benefit from additional support.

Appropriate records must be maintained in accordance with operations' training procedures.

The operation shall establish an effective process to test that competency and training objectives have been achieved and to assess driver competence and feedback is gathered from attendees.

6.3 Medical Fitness to Drive

Vedanta operations are required to ensure all drivers are medically fit to drive, such that being in charge of a vehicle does not pose a risk to their own health and safety, or that of others. A person's fitness to drive can be affected by a medical condition, temporary illness and by the environment which they work in. Driving if not properly managed can also lead to deterioration in a pre-existing condition, for example lower back pain. Relevant health issues should always be addressed in risk assessments (see above section on General Management).

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6.3.1 Health Assessments

A health assessment should be conducted for all potential drivers as part of the recruitment process. An initial pre-employment health questionnaire could be completed for this purpose. This should be developed with the help of a qualified occupational health (OH) professional and handled according to the established rules of country-specific medical confidentiality and data protection legislation and employment law. Where results indicate there is or may be a problem, the employee can be referred to an OH specialist for further assessment before recruitment.

Medical assessments of fitness should be undertaken for all employees whose work involves driving as their main role in accordance with local laws and regulations (if established). This should include as a minimum:

- Eyesight/vision – at least every two years or more frequently if advised by an optician or country-specific legislation;
- Physical mobility (ability to fully control and operate the vehicle);
- Hearing (for warning signs and spoken instructions); and
- Understanding of instructions and risks associated with duties.

Employees who drive on behalf of the company, but whose main documented duties for the company are not focused on not driving should be considered for medical assessment of fitness as above, but shall in all cases undergo the medical tests required to obtain and retain a valid license in the country in which they are employed. This should at a minimum include eyesight tests and employees must be made aware they must meet the minimum legal eyesight standards (if any).

Periodic health surveillance should also be considered for all drivers to help ensure that work related health issues that might affect an employee's ability to drive are identified at an early stage and suitable measures implemented. It can also be used to assess the status of previously identified ill health conditions. However, health surveillance can be expensive and should be targeted at those for which driving is their main role and with specific problems and health issues.

As above, all drivers whether it is their main role or not, should be advised to have their eyes tested every two years or more often, if advised by an optician. If employees are required to drive with glasses or contact lenses, they must be instructed to do so whenever they drive. Advice should be given to keep a spare pair of glasses or lenses in the vehicle.

6.3.2 Reporting Medical Conditions

In some countries, licensing agencies set minimum medical standards and rules for drivers and conditions that must be reported to the licensing authority. These may include:

- Neurological disorders;
- Cardiovascular disorders;
- Diabetes;
- Psychiatric disorders;
- Visual disorders;
- Renal disorders; and
- Respiratory and sleep disorders.

Vedanta operations should identify country specific requirements and implement procedures to capture and report on this information as necessary. Employers, line managers and drivers should be aware of and follow these country-specific rules.

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Employees should feel confident they can report health issues and their ability to drive safely without this affecting their job security or career prospects and that health problems will be dealt with sympathetically and appropriate occupational advice will be available. Managers should receive training in “soft” skills needed when dealing with health issues and the need to respect medical confidentiality. Return-to-work interviews should be conducted to assess whether a person is fit to drive again and whether additional support is needed.

Operations should never permit any employee to drive whilst under the influence of drugs or alcohol. A fit for driving at work policy should be in place incorporating defined action levels for drugs and alcohol. Vedanta operations should have systems in place to make sure drivers are prevented from driving if they appear to be affected by alcohol, drugs or medication, or if there is a risk of being affected. This could include offering transport or information on public transport options where work events offer alcohol.

It is recommended sites use alcohol breath analysers for testing vehicle drivers on regular basis while entering to the premises.

6.3.3 Drivers Responsibilities for Fitness

Anyone who drives on business for Vedanta should be informed through instruction or training that they are responsible for driving within the law and deciding whether they are physically, mentally and emotionally fit to drive. This means at all times:

- Ensuring they get enough rest or sleep before they drive;
- Making sure they are never affected by any medications, alcohol or illegal drugs that may make them unfit to drive and understanding that these substances may make someone legally unfit to drive, even if they feel fine; and
- Making sure that they do not drive if they are affected by any condition that may make it difficult for them to drive safely.

Drivers who have been cautioned or convicted etc. for driving offences should inform their line manager to enable a discussion to be held to determine if fitness to drive was a factor.

6.3.4 Driver Information/Work Instructions

Each driver should be given appropriate instructions and information for reference that will help him/her undertake his/her duties for safe and efficient driving. Drivers should have access to (1) information that will help them reduce risks and (2) safety critical information. This should include:

- Vehicle checks required;
- Recommended tyre pressures;
- What action to take in the event the vehicle is considered unsafe;
- What action to take in the event of a breakdown; and
- Guidance and advice on good posture and how to adjust seats and head restraints properly.

The reference material shall be provided in a language appropriate for the driver (typically this may comprise a company specific driver's handbook).

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6.3.5 Vehicle Tracking Systems

The primary objective of vehicle tracking is to understand and improve driver behaviour. Additional benefits of tracking systems, depending on the system used, may include: monitoring unauthorised use of vehicles, emergency response, incident investigation, and recovery of stolen vehicles.

Vedanta operations should consider the option of owned or hired vehicles driven for work purposes being subject to tracking, on a risk basis, so that driver location and behaviour can be monitored. Contractor vehicles, excluding goods delivery vehicles, operating on project sites could also be tracked.

Where this is not practical to do so, alternate means of monitoring driver behaviour should be established. Vehicle tracking devices could be fitted to special purpose vehicles (SPVs) where the SPV is able to exceed the established speed limits or where a specific risk has been identified that requires monitoring, and it is practical to do so.

Tracking systems are either active (real time live tracking) or passive (data recorders) systems.

- **Real Time Tracking Systems** - These systems provide global positioning system (GPS) monitoring via satellite/cell phone signal, providing real time live tracking of the vehicle's location and speed. Real time tracking systems provide the ability to record and continuously monitor a vehicle's location and speed. These systems have application in emergency response situations.

Memory Tracking Systems - These systems record and store GPS location and vehicle speed on a vehicle mounted memory device. These data are manually downloaded and reviewed at predetermined time intervals. These systems may allow a greater level of detail (data stored in 1 second intervals), making the system very robust for behaviour monitoring and incident investigations.

Device types include:

- Permanent vehicle mounted satellite/cellular (cell) phone: these systems are custom fitted to the vehicle and operate automatically when the vehicle is in use; and
- Portable: these systems are mobile units temporarily mounted in vehicles (e.g. hire or contractor vehicles).

The following table summarises the characteristics of each system:

	Behaviour monitoring	Unauthorised vehicle use	Emergency response	Incident investigation
Permanent - real time tracking systems	Good	Excellent	Excellent	Satisfactory
Portable - real time tracking systems	Good	Poor	Excellent	Satisfactory
Permanent - memory tracking system	Excellent	Limited	Nil*	Excellent
Portable – memory tracking system	Excellent	Limited	Nil*	Excellent

**Can be complemented with a personal emergency beacon device.*

Real time tracking has the potential to influence driver behaviour in the immediate term because a driver can be contacted in real time if potentially dangerous driving is detected.

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Determining the tracking system most suitable to a country or location should be based on a combination of:

- risk assessment;
- suitability to local conditions;
- capital and on-going operational costs; and
- resources required to manage on-going monitoring.

A minimum frequency of record review from the tracking systems should be established with the intent to identify compliant and non-compliant driver behaviour. The responsibility for downloading and analysing the data should be documented. Recommended frequency for tracking reviews are:

Random site fleet checks	Weekly
Driving incident	Within 24 hours
Suspicion of breach of driving policy and rules	Within 24 hours
Random selection at vehicle's return to home base	50% of vehicles

The tracking review report should analyse driving data per driver (not vehicle). Analysis of the driver behaviour data should include, at a minimum:

- Driving in excess of established speed limits;
- Driving in restricted hours (excluding authorised occasions);
- Unauthorised use of vehicle;
- Use of unauthorised routes;
- Fatigue management compliance; and
- Any breaches detected via vehicle tracking systems should be reported and investigated as an incident in accordance with the incident reporting and investigation processes (see Section 7).

Disciplinary measures for poor or unsafe driving should be established and managed in accordance with local systems.

7 MANAGING THE JOURNEY

The most obvious way of reducing motoring accidents is to reduce the amount of driving by using public transport or employing audio/video conferencing facilities. However, if journeys are essential, better route planning can often reduce driving distances and perhaps avoid particular trouble spots.

7.1 Consider the Alternatives

Although driving is the most practical option for most work related journeys, it is still one of the most dangerous things most people do at work. The risks involved are not always necessary or justified. Driving also emits CO₂ and other pollutants and therefore has an impact on the local environment and climate change. Operations should aim to reduce the number and length of road journeys by:

- Using telephone, email or video conferencing instead of driving, where possible;
- Exploring the options for using public transport, including bus, rail, coach and air travel; and
- Encouraging employees to share journeys, and the driving, with a colleague.

Guidance Note – Fleet Management

7.2 Planning the journey

The nature of road journeys varies widely from personal transport to delivery of goods, including extremely heavy and bulky items. Different types of journey should be subject to formal risk assessment to identify the hazards, levels of risk and then to identify means of reducing the risks to minimum practicable levels.

Potential hazards of journeys include extreme weather, a route that passes through an area with a lot of crime and violence or an area that a breakdown service may find hard to reach. Long distance journeys are also potentially more hazardous because:

- The journey is more prone to delay, which extends the travel time even further;
- The driver is exposed to road and traffic hazards for longer;
- At least some of the roads are likely to be unfamiliar;
- Driving conditions may vary;
- The drive is likely to include rush hour or start early in the morning or end late in the evening; and
- The driver is likely to get more tired.

Every journey should therefore be a managed journey. Those responsible for journey planning (managers or drivers) should plan journeys carefully especially if they are complex, hazardous or cover a long distance. Travel and route planning tools are available from internet sources and should be used (e.g. Google Maps, AA route finder in the UK and Europe etc.). Although satellite navigation (satnav) devices can also be used, it is a good idea to have printed directions to hand, in case the satnav fails.

In planning routes, managers should take account of:

- Road type - accident rates tend to be higher on local roads and lower on motorways;
- Hazards – road works, accident hotspots;
- Traffic densities – time journeys to avoid peak traffic hours; and
- High risk features such as schools or busy town centres/shopping areas -employees should avoid driving in adverse conditions – operations should actively discourage driving at night (where practicable) and in adverse weather conditions, particularly fog, high winds, ice, snow or flooding or where there is danger of becoming stranded in remote locations.

Ensure employees are able to postpone journeys or change routes if the police and travel organisations advise against road travel due to weather conditions and that they know the reporting procedure in such instances.

When travelling into a remote or hostile environment, drivers should put emergency plans in place well in advance of the journey.

For personal safety, drivers should be instructed that they should always let someone else know about their travel plans.

An example journey planner is presented in AnnexG.

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7.3 Fatigue Management

One of the single most important things operations should do is ensure their drivers are not at risk of falling asleep at the wheel. This is most likely to happen:

- On long journeys on monotonous roads;
- In between 2am and 6am and 2pm and 4pm, especially after eating or drinking alcohol, having less sleep than normal, if taking medication that causes drowsiness or after long working hours or journeys; and
- As part of the recruitment and training process, drivers and line managers should be made aware of the dangers of falling asleep at the wheel (see Section 5.2.4).

A system should be in place to manage driver fatigue. The following could be considered:

- Empowerment of drivers who feel tiredness (fatigue) and consider that this tiredness is or will impair their ability to drive safely, being able to stop the vehicle in a safe location and to take an appropriate period of rest before recommencing the drive;
- Specifications for maximum continuous driving hours in any 8 and 24 hour period and rest breaks and journey planning (See Section below on Journey Planning);
- Planning of driving schedules so they do not require staff to drive too far for too long or too fast without adequate rests;
- Reducing distances - Set-in house limits on maximum driving distances per day, per week, per month. When requiring employees to drive to and from a location, set reasonable mileages which they should not be expected to exceed in a single day;
- Controlling driver's hours – set in-house limits for unbroken driving hours, including daily, weekly and monthly limits. As a working rule, no driver should be permitted to drive 2 hours without a 15 minute break. Drivers hours should be at least the legal minimum;
- Overnight stays - Where employees have to travel a long distance to a work location at the beginning of a day or the journey is likely to take more than two hours, consider asking staff to travel the night before and stay overnight. Where a planned day is likely to exceed maximum hours or distances set out by the operation, an overnight stay in a hotel should be mandated. Be aware that some employees may want to avoid staying overnight, so check work schedules and journey plans to ensure they are not tempted to undertake long journeys when they are likely to be tired;
- Review shift arrangements – night shifts and rotating shifts can cause severe sleep deprivation. Review shift arrangements to see if these do not lead employees to drive whilst fatigued, and where there are problems identified consider providing safer alternative transport;
- Optimise schedules – ensures that journey scheduling allows drivers to take account of weather and traffic conditions and to comply with speed limits; reduces night time driving and avoiding times when falling asleep at the wheel is more likely;
- Payment by delivery schedules or other reward mechanisms must not encourage drivers to break traffic laws or Vedanta's driving rules which could lead to driving when tired; and
- Driving after a long haul flight - Driving after a flight of six hours or more should be avoided. Drivers may also need to take special care to keep to the correct side of the road.

7.4 Managing the Use of Mobile Phones (cell phones)

Using a mobile phone while driving is dangerous. There is no difference between hand-held and hands-free phones in the way they distract drivers. This is because it is the conversation that is distracting, not the phone. Drivers who use a mobile phone (even hands-free) are four times more likely to have a collision, and the effect it has on drivers' reactions is greater than being at the legal limit for alcohol in the blood for many countries. Drivers who use a mobile phone:

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- Are much less aware of what is happening on the road around them;
- Fail to see road signs;
- Fail to maintain proper lane position and steady speed;
- Are more likely to 'tailgate' the vehicle in front;
- React more slowly and take longer to brake;
- Are more likely to enter unsafe gaps in traffic; and
- Feel more stressed and frustrated.

Vedanta's Technical Standard TS18 on *Transportation and Logistics Management* states that mobile phones, whether hands free or not shall only be used whilst the vehicle is stationary and in a safe location. Drivers should be advised to turn their phone off, and use voicemail instead; they can catch up on any missed calls when they stop or take a break. Should there be a need to make calls from a vehicle or car, this should be done while safely and legally parked with the engine switched off.

Drivers must be instructed that in addition to using the mobile phone for phone calls, they should never:

- Create or read text messages or e-mails;
- Take or view photos and videos;
- Access the internet; and
- Play games or use other applications.

7.5 Mobile Satellite Navigation and Other Electronic Devices

When using a satnav device, it should always be securely attached to the vehicle. It should not be placed in the lap or held by hand whilst driving. If the satnav is attached to the windscreen, it must not block the driver's view.

Whenever possible, the satnav's voice prompts should be used instead of looking at the screen.

Drivers should avoid entering or adjusting route data when driving. If the route needs to be manually re-programmed this should be done whilst legally parked, ideally with the vehicle's engine switched off.

Other electronic communication devices should not be used whilst driving on company business, including portable radios, push-to-talk devices or handheld microphones.

7.6 Smoking in Vehicles

In some countries and states/provinces it is an offence to smoke in company vehicles. Similarly, it may also be an offence to smoke in a privately owned vehicle containing passengers whilst it is on a business related journey.

Commercial vehicles and company cars should be kept smoke-free (i.e. no one is to smoke in the vehicle at any time, including during breaks and outside of working hours).

7.7 Other Recommendations

It is recommended that sites provide and ensure usage of fluorescent jackets by the drivers, cleaners/ vehicle attendants who enter the premises of Vedanta. This requirement can be added in the offer / tender document.

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Sites should provide rest rooms / designated places for the truck drivers in each operation, to avoid drivers roaming and entering un-authorised areas and operations.

8 INCIDENTS AND ACCIDENTS

All incidents that happen when driving on Vedanta business must be reported as soon as possible. Driving incidents should be analysed and investigated, to try and prevent similar incidents in the future. Drivers may also need to inform the police when an accident occurs depending on local requirements.

Drivers have no obligation to report driving incidents that happen in their own car when they are not at work, however, it can be a good idea to discuss any accidents with a manager as it helps operations support employees in training and look after their wellbeing.

It is important that drivers are adequately prepared should an accident or incident occur and therefore in addition to emergency planning arrangements, operations should develop a policy of what information to exchange with other people who are involved in the accident, including witnesses.

Driving emergency plans shall be co-ordinated with the operations emergency preparedness and response plan to ensure that decisions involving regional and corporate crisis management team are detailed along with engagement with the media, community and other stakeholders. See also the requirements of the Vedanta Technical Standard TS13 on *Emergency and Crisis Management*.

9 CONTRACTORS

Managers should share the Vedanta guidelines with contractors, especially where they do not have standards of their own. Based on risk, operations should conduct audits of contractors' driver safety arrangements. The selection and management of contractors with regards to vehicles should include:

- Assessment of suitability of the contractor's vehicles for the proposed purpose and working environments;
- Establishment of minimum safety requirements for each vehicle type and ancillary equipment assessment of maintenance programme; and
- Inclusion in operational management, such as hazard identification and risk assessment; work instructions; audits and inspections.

10 OTHER USEFUL SOURCES OF INFORMATION ON FLEET MANAGEMENT

- Managing Occupational Road Risk – Royal Society for Prevention of Accidents.
- Driving at Work – Managing Work Related Road Safety (INDG 382)
- Workplace Transport Safety (HSG 136)

Guidance Note – Fleet Management

DEFINITIONS

Definitions of key terms used in this document are shown in the following table.

Term	Definition
Continual Improvement	A recurring process of enhancing the sustainability governance system in order to achieve improvements in overall sustainability performance consistent with Vedanta Mission, Values and Code of Conduct.
Emergency Response	The decisions and measures taken to contain and/or mitigate the effects of an emergency, to prevent any further impact and to regain control and restore order in its immediate aftermath, and then recover to a normal state. This process is facilitated by an Emergency Response Team and Emergency Preparedness and Response Plans, which should both exist at the Vedanta Company and operation level.
Employee	An individual who is engaged to work directly for Vedanta on either a part-time or full-time basis and for a fixed period or on permanent basis and is salaried. By virtue of the individual's contract of employment, the employee is obliged to adhere to Vedanta's terms and conditions of employment (specific to Group or the subsidiary employing the individual), and is protected by national (where it exists) and international laws concerning labour and working conditions.
Hazard	An object, property or an activity that can cause adverse effects e.g. a high voltage electricity supply or a toxic chemical may present a hazard, meaning that they present the potential for harm.
Incident	An event or chain of events which caused or could have caused injury, illness, loss of assets or potential or actual damage to relationships or reputation.
Investigation	A systematic and structured analysis of an incident and the events and conditions leading up to it, with the aim of (i) identifying the root cause(s) that allowed that incident to occur, and (ii) proposing effective corrective and preventive actions so as to prevent any future recurrences.
Operation(s)	A location or activity that is operated by a Vedanta Company and is part of the Vedanta Group. Locations could include mines, refineries, ports or transportation activities, wind farms, oil and gas development sites, offices including corporate head offices, and research and development facilities.
Preventive action	An action from an audit, assessment or other evaluation that is identified and implemented to prevent the reoccurrence of an actual or potential non-conformance.
Procedure	Specified way to carry out an activity or a process.
Record	Document stating results achieved or providing evidence of activities performed. A record is not a 'live' or work in progress document, but holds data and information of past events and therefore does not require updating.
Risk	The effect of uncertainty on objectives (as defined by the ISO 31001 Standard). Uncertainties include events (which may or not happen) and uncertainties caused by a lack of information or ambiguity.
Risk assessment	The formal process of identifying, assessing and evaluating the health and environmental risks that may be associated with a hazard.

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Term	Definition
Training	Recognised, accepted and prescribed training with a set and replicable structure.
Vedanta Company	A subsidiary of Vedanta Group either fully or majority owned that has its own management structure (e.g. Hindustan Zinc Limited, Vedanta Aluminium Limited, Sterlite Industries Limited, etc.)
Fleet managers	Individuals who are given responsibility for the operation and management of Vedanta fleet vehicles
Goodsvehicles	Vehicles used for moving heavy loads on-road or off-road
Leased or Hired vehicles	All leased or hired vehicles used by Vedanta Operations including short term vehicle hires, taxis and chartered vehicles
Night driving	30 min after sun set until 30 min prior to sun rise
On-road vehicles	Includes company provided staff vehicles. Covers light vehicles (2WD or 4WD) that are primarily designed for transporting personnel on the general road network. This is generally a higher speed environment with significant amounts of traffic and constitutes a high risk, high consequence environment that justifies the provision of maximum safety features
Off-road vehicles	Light 4WD vehicles that are used in field circumstances for carrying equipment or personnel. As well as off-road conditions these vehicles may still be used in trafficked, high speed environments. While off-road vehicles may not always be available with the safety options seen in on-road vehicles, effort shall be made to select safety features that reflect their on-road use
Fleet vehicles	All vehicles used by RTX operations including purchased vehicles and long term leases
Special purpose vehicles	Include tracked or wheeled vehicles for extreme terrains

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RELATED DOCUMENTATION

A summary of the references and supporting documents relevant to this document is provided in the following table.

Doc. Ref.	Document name
POL 05	Supplier and Contractor Management
POL 06	HSE Policy
MS 01	Leadership, Responsibilities and Resources
MS02	Stakeholder Materiality and Risk Management
MS 04	Compliance and Other Requirements
MS 05	Objectives, Targets and Performance Improvement
MS 06	Competency, Training and Awareness
MS07	Management of Change
MS 09	Documentation and Records Management
MS 10	Data Management, Performance Monitoring and Reporting
MS 11	Incident Reporting and Investigation
MS 12	Auditing and Assurance
MS 13	Corrective and Preventive Action Management
MS 14	Management Review and Continual Improvement
TS 02	Employee Consultation and Participation
TS 05	Stakeholder Engagement
TS 06	Supplier and Contractor Management
TS 10	Safety Management
TS 12	Occupational Health Management
TS 13	Emergency and Crisis Management
GN 01	Incident Investigation
GN 02	Hazardous Materials Management
GN 07	Risk Assessment
GN 10	PPE
GN 11	Asbestos Management

Guidance Note – Fleet Management

ANNEX A: DAILY VEHICLE CHECKLIST (checks to be conducted before use of the vehicle)

Vehicle registration no: _____
 Vehicle make/type: _____ Operator: _____ Date: _____

EXTERNAL VEHICLE CONDITION

Item	√ = satisfactory/available X = defective/missing N/A = not applicable	Comment
Condition of vehicle bodywork, windscreen, windows, lights		
Condition of windscreen wiper blades		
Cleanness of windscreen, windows, mirrors, lights, number plate		
Security of load, trailer, roof rack		
Condition of tyres, tyre pressure, tyre wear		
Availability of spare wheel & jack		

FLUIDS

Item	√ = satisfactory/available X = defective/missing N/A = not applicable	Comment
Engine oil level		
Coolant level		
Windscreen wash level		
Brake/clutch fluid		
Power steering fluid		
Condition of battery		
Oil or waste leaks		

VEHICLE INTERIOR AND EQUIPMENT

Item	√ = satisfactory/available X = defective/missing N/A = not applicable	Comment
Condition & function of seat belts		
Head restraint adjustment		
Mirror adjustment		
Tax disk		
First aid kit		
Fire extinguisher		
Torch		
Warning triangle		
Vehicle handbook		

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FUNCTION CHECKS BEFORE STARTING THE JOURNEY

Item	√ = satisfactory/available X = defective/missing N/A = not applicable	Comment
Warning light		
All lights		
Horn		
Washers & wipers		
Brake		
Fuel		

All the items above have been checked and any defects and omissions reported.

Driver's signature: _____

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ANNEX B: FLEET AUDIT CHECKLIST

Fleet Audit Checklist used for evaluating each vehicle

No		Checkpoint	What to Check	Issues - Yes/No	Remarks & Feedback	Priority (H/M/L)	Action Plan	
							Responsibility	Target Date
1	1	Certificate of registration	Certificate of Registration (Form 23) availability					
	2	Valid Road permit	Available, validity					
	3	Valid Road Tax payment receipt	Available, validity					
	4	Valid Insurance Papers	Available, validity					
	6	Valid Annual Fitness certificate	Available, validity					
	7	Valid Driving Licence of the driver	Available, validity, in original					
2	A	Body						
	1	Cabin	Denting, loose mountings					
	2	Doors	Bend, denting, handle, mountings					
	3	Panels	Intact, glass cracks, mountings					
	4	Chassis	Bend, corrosion, mountings, Road spring connectivity, Bushes					
	5	Security locks	Check fuel tank, toolbox, battery, racks, load/luggage locks intact					
	6	Rear View Mirror	Mountings, visibility					
	B	Interiors						
	1	Upholstery	All seats, neat fitting, clean					
	2	Cabin roof	No loose hangings, clear fitting					
	3	Door panels	Bend, denting, handle, mountings					
	4	Instrumentation panel	Intact, glass cracks, mountings, function					
	5	Driver Seat	Mountings, adjustments, clean					

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Fleet Audit Checklist used for evaluating each vehicle

No		Checkpoint	What to Check	Issues - Yes/No	Remarks & Feedback	Priority (H/M/L)	Action Plan	
							Responsibility	Target Date
	6	Co- passenger Seat	Mountings,adjustments,clean					
	7	Seat belt & usage	Retractable,mountings,clean					
	C	Engine						
	1	Engine starting	Key positions,bend,clamp,groove					
	2	Throttle operation	No revving/no stalling					
	3	Leakage	Check for any leakages					
	4	(a) Engine Oil	Level & viscosity					
	5	(b) Coolant	Level up to the mark					
	6	(c) Air	Filter,oil level,mountings					
	7	(d) Fluids	Level & viscosity					
	8	Engine mountings	Bolts tightened,washers					
	D	Brakes						
	1	Brake operation	Spongy,pedal play &pressure,bends, no slippery					
	2	Brake Air/ Fluid Leakage	Fluid level,grade/Air brake pressure					
	3	Parking brake	Knob,mounting,movement					
	4	Brake fluid / tanks / reservoir	Level &viscosity,mountings					
	E	Clutch						
	1	Clutch operation	Spongy,easy engagement of gear					
	2	Clutch engagement	Pedal spongy,play& pressure					
	F	Suspension						
	1	Springs	Leafs,U-clamps,mounting,broken,greasing					
	2	Shock absorbers	Leakages,pressure,mounting					
	3	Shackle & 'U' Bolts	Intact					

Guidance Note – Fleet Management

Fleet Audit Checklist used for evaluating each vehicle

No		Checkpoint	What to Check	Issues - Yes/No	Remarks & Feedback	Priority (H/M/L)	Action Plan	
							Responsibility	Target Date
	4	Body Mountings	Mounting to chassis with proper position					
	5	Fluid leakage	In shockers or any					
	6	Lubrications	Greasing					
	G	Differential & Gear Box						
	1	Differential	Bend,any leakages					
	2	Mountings	Tightened					
	3	Gear box	Leakages,mountings,no cable hangings					
	4	Steering gear box	Leakages,mountings,lubrication					
	5	Oil level deferential	Level & viscosity					
	6	Propeller Shaft	Bend,front& rear end mountings					
	H	Axle						
	1	Front Axle	Bend,mounting					
	2	Rear Axle	Bend, mounting					
	3	Rear Axle deformation	Bend, mounting					
	4	Axle bolts	Tightened					
	I	Electricals						
	1	Starter	Mounting,no loose cables,leakages					
	2	Alternator	Mounting, no loose cables, leakages					
	3	Head lamp	Focus,clear,clear,bulb,no broken glass					
	4	Tail lamp	Focus,clear,clear,bulb, no broken glass					
	5	Dipper switch	Focus with dipper switch,function					
	6	Horn	Button,volume,clear,function					
	7	Wind shield wiper	Cracks,bending,clear& clean					
	8	Instrumentation panels	Panel glass clear,mountings,function					

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Fleet Audit Checklist used for evaluating each vehicle

No		Checkpoint	What to Check	Issues - Yes/No	Remarks & Feedback	Priority (H/M/L)	Action Plan	
							Responsibility	Target Date
	9	Stop lights	Focus, clear, clean, bulb, function, no broken glass					
	10	Indicators						
		a) Left front	Focus, clear, clean, bulb, function, no broken glass					
		b) Left rear	Focus, clear, clean, bulb, function, no broken glass					
		c) Right front	Focus, clear, clean, bulb, function, no broken glass					
		d) Right rear	Focus, clear, clean, bulb, function, no broken glass					
	11	Cabin lights	Focus, clear, clean, bulb, function, no broken glass					
	12	Switches	Check for functioning properly					
	13	Wiring harness	Clamped, no loose wiring					
	14	Reserve light	Function, reverse tone, bulb, clean & clear					
	15	Brake lights	Focus, clear, clean, bulb, function, no broken glass					
	16	Electrical connection & routing	Cables clamped, no loose fittings					
	J	Exhaust						
	1	Exhaust manifolds	Mountings, Intact					
	2	Exhaust silencer	No leakages, mountings					
	3	Exhaust nut /bolts	Tightened					
	4	Muffler & pipe condition	No leakages, mountings					
	K	Glass & Others						

Guidance Note – Fleet Management

Fleet Audit Checklist used for evaluating each vehicle

No		Checkpoint	What to Check	Issues - Yes/No	Remarks & Feedback	Priority (H/M/L)	Action Plan	
							Responsibility	Target Date
	1	Wind shield	Cracks,bending,clear& clean					
	2	Cabin driver side	Functioncracks, clear& clean					
	3	Cabin cleaner side	Function cracks, clear& clean					
	4	Tank covers	Intact					
	5	Ladder	Mountings,corrosion					
	6	Bumpers						
		a) Front	Mountings,bend/denting					
		b) Rear	Mountings, bend/denting					
	7	Statutory warnings	Reflectives, display board, clear vision					
	L	Proprietary Parts						
	1	Battery	Level,terminals,mounting,cables					
	2	Tyres front – left	Pressure,cut,stones,flints					
		a) Front right	Pressure, cut, stones, flints					
		b) Rear left Inner	Pressure, cut, stones, flints					
		c) Rear left Outer	Pressure, cut, stones, flints					
		d) Rear Right Inner	Pressure, cut, stones, flints					
		e) Rear Right Outer	Pressure, cut, stones, flints					
	3	Fuel pump	Mountings,leakages,routing					
	4	Fire extinguisher	Mounting,expireddate,position					
	M	Miscellaneous						
	1	Radiator	Fins/grill clear,mounting					
	2	Radiator Cap	Function					
	3	Radiator Coolant / Leakage	Level,any leakages					
	4	Oil tank	Level & viscosity					
	5	Diesel tank	Level,leakages,mountings					

Guidance Note – Fleet Management

Fleet Audit Checklist used for evaluating each vehicle

No		Checkpoint	What to Check	Issues - Yes/No	Remarks & Feedback	Priority (H/M/L)	Action Plan	
							Responsibility	Target Date
	6	Fuel tank / locker	Locker availability					
	7	Fan belt	Loose					
	8	Wheel Nut / bolt	Tightened					
	9	Tyre pressure	As per specifications					
	10	Spare tyre mounting	Mounting,pressure					
	11	Radiator shroud	Shroud/grill clear					
	12	whether Safety Triangle is available	Available,intact,reflective					
	13	First Aid box available in the vehicle	Available,intact,placed					
3	1	General appearance & condition of cabin, chassis and racks	Cleaned,painted					
	2	Dent, Rust, paint on - Chassis, cabin or upper structure	Appearance,bend,paintcondition,marks					
	3	Neatness of advertising display	Display board clear,visibility					
	4	No unwanted material in cargo/cabin area	Loose items,rags,clear					

Guidance Note – Fleet Management

ANNEX 3 –AN EXAMPLE SEAT BELT USAGE POLICY

Required Seat Belt Use:

We value the lives and safety of our employees. Because it is estimated that seat belts reduce the risk of dying in a vehicle crash by 45 percent, our operation has adopted the following policy concerning employee seat belt usage.

In addition to following all traffic regulations, all employees and their passengers are required to use a seat belt when travelling in any vehicle while in the course of conducting company business. The requirement applies to business travel in a vehicle owned by the company, in a rental vehicle and in a vehicle owned by an individual employee, and all commercial and site vehicles regardless of whether the employee is compensated for the use of his/her vehicle.

If an employee is provided a company-owned vehicle that is used in the course of his/her employment and is also available for that employee's personal use, that employee, together with all passengers who occupy the vehicle at any time and for any purpose, whether business-related or personal, are required to use seat belts at all times the vehicle is in motion or the engine is running.

The use of seat belts is to be considered a condition of employment with this company. Failure to abide by this stated policy will be considered a breach of that condition of employment and subject the person in violation.

Guidance Note – Fleet Management

ANNEX D:EXAMPLE ADVICE FOR DRIVERS – BREAKDOWN SAFETY

General breakdown procedures

- If you break down, avoid stopping in a dangerous place if possible, such as on a roundabout or corner. If you can, keep driving safely for a short distance, drop your speed to dead slow, use your hazard lights and try to pull off the road completely or pull over on a straight bit of road.
- If you have to stop on a road, display your emergency triangle at least 45 metres behind your vehicle (but don't do this on a motorway).
- Do not attempt to fix your vehicle yourself by the roadside. Call your employer's designated breakdown service.
- Switch off your engine and wait in a safe place, away from traffic.

Motorway breakdown procedures

The most important thing for drivers to consider is their safety and that of other road users. If your vehicle develops a problem on the motorway:

- Leave at the next exit if possible and stop at the service area.
- If the problem requires you to stop immediately, pull onto the hard shoulder and stop with wheels turned away from traffic.
- Park as close to the side of the road as possible and try to stop near an emergency phone.
- Put on your hazard lights to ensure other drivers know you are there. Turn on side lights in poor visibility.
- DO NOT use your warning triangle on the hard shoulder.
- NEVER attempt repairs yourself on the hard shoulder. If your vehicle develops a problem and you think you can fix it, continue to a service station, or leave the motorway and find a safe place to stop before attempting the repair.
- NEVER attempt to retrieve lost loads or tyres from the road.

Calling for help

If possible, use the nearest emergency phone. In some countries, marker posts show the direction of the nearest phone. The phones connect directly to the police control centre, and are numbered so that you can be easily located.

Waiting for help

If you must stop on the hard shoulder:

- Even if it's cold or rainy, get out of the vehicle – it's dangerous to wait inside as you are at risk of being hit from the rear at high speed by passing traffic.
- Make sure you and all passengers exit the vehicle on the side that is not directly into the traffic. Anything on the hard shoulder within half a metre of the white line is at high risk of being struck by passing traffic.
- Walk off the road – up the embankment if there is one, or climb over the crash barrier into a field if possible.
- NEVER try to cross lanes to the other side of the motorway.

Avoid breaking down

While it's impossible to be certain you'll never break down, you can minimise the chance of it happening. Most breakdowns are due to poor vehicle maintenance and could have been avoided.

- Work with your employer to ensure your vehicle is regularly serviced and checked, including checking wipers and tyres are in good condition and that fluid levels are adequate.
- Report faults immediately.
- Ensure you understand your vehicle warning lights.

Be prepared

Carry a charged mobile phone (kept switched off and out of reach whilst driving), and an emergency kit in your vehicle; ask your employer to confirm what is provided by them, if anything.

An emergency kit should include items such as warm and high visibility clothing, a torch, water and a reflective triangle.

Guidance Note – Fleet Management

ANNEX E: EXAMPLE IN VEHICLE DRIVER ASSESSMENT

EXAMPLE IN VEHICLE DRIVER ASSESSMENT					
Introductory Details:					
Name				Date of Birth	
Date of Assessment		Location		Vendor	
Licence details		Licence Type			
Traffic		Light / Medium / Heavy	Weather		Fair / Inclement
Driver Assessment Activity Wise					
	Activities	Marks Scored	Max. Marks	Comments	
1	Pre-driving checks		5		
2	Before moving all seat belts fastened/adjusts mirrors		5		
3	Moving & merging		5		
4	Turnings L&R (lane selection, speed, observation, anticipation)		5		
5	Observation and scanning (checks mirrors every 5-8 seconds) moves eyes constantly- 360' awareness. Rear observation (when braking "foot on brake, eyes on mirrors)		10		
6	Adequate stopping distance (stop 1/2 vehicle length behind vehicle ahead)		2		
7	Compensates early for obstacles		5		
8	Anticipates light changes- avoids sudden stops		5		
9	Before entering intersections slow down, scan, observe, eye, contact		5		
10	Avoid driving with only one hand		2		
11	Maintains 2 to 4 seconds following distance		5		
12	Avoid driving in others blind spots		3		
13	Overtaking/Passing		5		
14	Strive to ride alone - out of the pack		3		
15	Lane selection & management		5		
16	Hazard perception		5		
17	Appropriate speed selection		5		
18	Non aggressive, courteous, calm, patient, attitude		5		
19	Control management0(gear clutch, acceleration)		10		
20	Reversing & parking		5		





















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	Total	100	
Root Cause Analysis			
1	Lack of skill or knowledge		
2	Correct way takes more time/requires more effort		
3	Short cutting standard procedures in rewarded or appreciated		
4	Person perceives that doing job exactly according to procedures is not important		
5	Lack of inadequate operational procedures or work standards		
6	Inadequate communication of expectations regarding procedures or work standards		
7	Inadequate tools or equipment		
Corrective Action Plan			
Questionable item	Root cause	Recommendations Preventive action steps	Person Responsible
Trainers Observations/Comments and feedback E.GS			

Intersection crossing
 Single hand driving
 lane discipline
 Harsh clutch operation

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ANNEX F: EXAMPLES OF SAFETY SIGNS

 <p>No Entry to Traffic Sign</p>	 <p>No Entry Sign</p>	 <p>Stop Sign</p>	 <p>No Exit Sign</p>	 <p>Speed Limit Sign</p>
 <p>Way Out Sign</p>	 <p>Uneven Road Sign</p>	 <p>Two Way Traffic Sign</p>	 <p>Left-hand bend Sign</p>	 <p>Steep Incline Sign</p>
 <p>Maximum vehicle height Sign (measurements)</p>	 <p>Height Restriction Sign</p>	 <p>One Way Sign</p>	 <p>Caution Vehicles Turning Sign</p>	 <p>Danger Deep excavation Sign</p>
 <p>Warning Open Pit Sign</p>	 <p>Pedestrian Look Both Ways Sign</p>	 <p>Danger Overhead Cables Sign</p>	 <p>Beware Pedestrians crossing Sign</p>	 <p>Give Way Sign</p>

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ANNEX G: EXAMPLE OF A JOURNEY PLANNER

Journey planner

