QNJAC Guidance

Workplace Transport & Pedestrian Interface - Self Audit tool

This guidance has been produced by a working group of QNJAC which comprises of industry experts from varied backgrounds, the Trades Unions and HSE*. The purpose of this document is to provide a structured framework to enable organisations to carry out self-audits of transport and pedestrian controls to prove their effectiveness as well as identifying weaknesses in the controls that could lead to serious injury or loss of life.

Approximately 20% of all fatalities in the mineral extraction industry involve vehicles or other mobile equipment. When a pedestrian comes into direct contact with mobile equipment in a quarry environment the likelihood of any resulting incident being of a serious or fatal nature is very high.

Systems for achieving effective control of transport related hazards will include reference to many areas including:

- Development of an appropriate traffic management plan that is customised for the specific issues at each site
- Provision of segregation measures to separate traffic and pedestrians
- Appropriate maintenance of equipment
- Training and competence of individuals
- Supervision and refresher training
- Audit and review of effectiveness of control measures

The findings of the audit can be recorded and used to write an action plan and a record made of the actions taken as a result of the audit. The question set can never be totally comprehensive in all circumstances, but it represents a good starting point that will be adequate in most situations.

Scope

The self-audit is not exclusive to the quarry industry. The same risks exist across a wide range of industries and the guidance therefore has a use in many industries within the mineral products sector. The questions in the self-audit do provide prompts to consider all aspects of the pedestrian / traffic interface.

Carrying out the audit

Allow enough time to carry out the audit. At large sites it is likely that the audit may have to be carried out over a period of time. Plan the time and stay to plan as far as possible. The audit does not have to be done in one go, so be realistic. The audit process is part of the function of supervision and monitoring, so it is useful if it is seen to be a regular on-going process rather than a one-off event.

Remember that the purpose of the audit is to uncover weaknesses in the systems on your site. Finding weaknesses is therefore a success and action taken as a result of the audit may prevent serious accidents or death.

Planning the audit is critical. The size of the site and complexity of plant and equipment is likely to be a significant factor in terms of the amount of planning required. However, regardless of the size of the organisation there are key considerations at the planning stage.

For example:

QNJAC Guidance

- Involve the workforce. Ensure that the workforce is fully briefed on the purpose of any audit and encourage them to become involved.
- Remember that it is often the workforce who are the most informed
- Encouraging a 'just culture' will help you discover more – actively encouraging your teams to share experiences of past 'near hits', whether previously reported or not, will likely yield many important insights on the effectiveness of the current procedures on site.

People are critical to the audit:

- Decide who will carry out the audit, it may be an individual or teams.
- Take time to brief them and train them if necessary.
- Check their competence and understanding of the process.
- Make time available to them.

There are a number of ways the audit can be carried out. The questions move through a logical sequence. There is also flexibility to split the task of auditing amongst members of a team with responsibilities for different areas of the site, for example. It doesn't matter how the audit is carried out or over how long a period, it is the rigour and integrity that matters. Remember contractors and external haulage drivers, they should be included in the audit process so that they can contribute their knowledge and understanding.

Useful references

Published by HSE, Managing for Health and Safety **HSG65**. Includes the widely recognised and used ***PLAN, DO, CHECK, ACT*** model to represent good management of Health and Safety. Checking or auditing plays an invaluable part in feedback to inform organisations of how deeply imbedded systems and procedures are in reality.

QNJAC have produced guidance notes and other supporting information that should be referenced when assessing the effectiveness of the controls at your sites: ***A Guide to Pedestrian Safety in Quarries & Surface Mining (2017)*** can be downloaded from **qnjac.co.uk**

The Mineral Products Association (MPA) have produced high quality guidance and supporting documents on the subject of vehicle and pedestrian segregation which has widely been accepted as good practice in the mineral products industry. Individual copies are available, and it is also available to download from **safequarry.com.**

The following checklist is based on a publication from the HSE - ***Site inspection: Workplace transport checklist*** and has been customised to increase its relevance to the typical circumstances found in mineral extraction and processing sites. It has been prepared as a guide to what operators should consider when trying to reduce the risk from vehicles in the workplace. It will not necessarily be comprehensive for *all* work situations.

QNJAC Guidance

Pedestrian Safety & Workplace Transport – Self Audit

Site / Organisation	
Audited By	
Date of Audit	
Date of review	

1. MANAGEMENT AND SUPERVISION OF WORKPLACE TRANSPORT RISK			
Question	**Yes**	**No**	**Actions**
Check, in *consultation with your employees*, that your level of management control/supervision is adequate			
Are site rules documented and distributed?			
Are your supervisors, drivers and others, including contractors and visiting drivers, aware of the site rules? Are they aware of their responsibilities in terms of helping to maintain a safe workplace and environment?			
Has a risk assessment been completed for all workplace transport hazards?			
Is the level of supervision sufficient to ensure that safe standards are maintained?			
Are sanctions applied when employees, contractors, etc., fail to maintain these standards?			
Are adequate steps taken to detect unsafe behaviour of drivers of both site and visiting vehicles as well as pedestrians? Are the underlying reasons investigated to correct unsafe behaviours?			
Is there good co-operation and liaison on health and safety matters between your staff and those who collect or deliver goods?			
Are 'near hits' involving vehicles and pedestrians routinely reported by site staff and visitors? Are *all* 'near hits' investigated and appropriate actions documented?			
Check what your drivers and other employees *actually do* when undertaking their work activities			
Do drivers drive with care, e.g., use the correct routes, drive within the speed limits and follow any other site rules?			

Do your drivers and other employees have enough time to complete their work without rushing or working excessive hours?			
Are your employees using safe work practices, e.g., when (un)coupling, (un)loading, securing loads, carrying out maintenance and inspections etc.?			
Do your employees and visitors *always* follow the designated pedestrian routes when moving about site?			
Do all site staff and visitors *always* follow the agreed communication protocols when moving about site eg. Announce themselves entering high risk areas and get verbal or visual acknowledgement *every time*?			
Do managers and supervisors routinely challenge and investigate unsafe behaviours they may come across?			
Do managers and supervisors *always* set a good example, for instance by obeying vehicle/pedestrian segregation instructions, and by wearing high visibility garments in line with site rules?			
2. **SITE LAYOUT AND INTERNAL TRAFFIC ROUTES**			
Question	**Yes**	**No**	**Actions**
Check that the layout of routes is appropriate			
Are the roads and footways suitable for the types and volumes of vehicular traffic and pedestrian traffic using them?			
Are vehicles and pedestrians kept safely apart using physical barriers where practicable?			
Where necessary are there suitable pedestrian crossing places on vehicle routes?			
Is there a safe pedestrian route that allows all site visitors to report for instructions when entering the site?			
Are there adequate numbers of suitable parking places for all vehicles and are they used?			
Is there a properly designed and signed one-way system used on vehicle routes within the workplace?			
Is the level of lighting in each area sufficient for the pedestrian and vehicle activity?			
Does the site have a plan showing traffic routes and key controls? Is the plan clearly displayed in appropriate places on site so that it can be referenced by site personnel and visitors?			
Check that vehicle traffic routes are suitable for the type and quantity of vehicles which use them			
Are they wide enough?			
Do they have firm and even surfaces?			

Are they free from obstructions and other hazards?			
Are they well maintained?			
Do vehicle routes avoid sharp or blind bends?			
Check that suitable safety features are provided where appropriate			
Are roadways marked where necessary, e.g. to indicate the right of way at road junctions?			
Are road signs, as used in the Highway code, installed where necessary?			
Are features such as fixed mirrors (to provide greater vision at blind bends), road humps (to reduce vehicle speeds), or barriers (to keep vehicles and pedestrians apart) provided where necessary?			
Check that pedestrian routes are fit for purpose			
Where physical barriers are installed, are they of the appropriate design relative to the volume, speed and type of traffic they are expected to segregate?			
Where edge protection bunding is installed on roadways is this to an agreed height and design appropriate to the size of the vehicles using the roadway?			
Do they have firm and even surfaces?			
Are they free from obstructions and other hazards?			
Are they well maintained?			
Do they have appropriate signage to direct pedestrians to their expected destination?			
Check that formal inspection procedures are in place			
Is there a regular inspection procedure in place to ensure that all the physical controls are still in place and are being adequately maintained?			
Is the site plan reviewed on a regular basis to ensure it is modified to reflect changes in the layout of stockpiles and other working areas?			
3. **VEHICLE SELECTION & SUITABILITY**			
Question	**Yes**	**No**	**Actions**
Check that vehicles are safe and suitable for the work for which they are being used			

Have suitable vehicles and attachments been selected for the tasks which are actually undertaken?			
Do vehicles have good direct visibility or devices for improving vision where reversing can't be eliminated and where significant risk still remains eg external and side mirrors; vision aids such as CCTV; sensing devices?			
Are they provided with horns, lights, reflectors, reversing lights and other safety features as necessary?			
Do they have effective service and parking brakes?			
Do they have seatbelts where necessary?			
Are surfaces, where people walk on vehicles, slip resistant?			
Is there a safe means of access to and exit from, the cabs and other parts that need to be reached?			
Is driver protection against injury in the event of an overturn, and measures in place to prevent the driver being hit by falling objects, provided where necessary?			
Do drivers of site vehicles have a means to communicate with other vehicles on site eg. In cab radios?			
Are operators involved or consulted on vehicle selection?			
4. VEHICLE MAINTENANCE			
Question	**Yes**	**No**	**Actions**
Check the level of vehicle maintenance is adequate			
Is there a regular preventative maintenance programme for every vehicle, carried out at predetermined intervals of time or mileage? Eg in accordance with manufacturers Instructions			
Is there a system for reporting faults on the vehicle and associated equipment and carrying out remedial work?			
Is there evidence that defects, when reported, are rectified in an appropriate timescale?			
Do the drivers carry out basic safety checks before using the vehicle?			
Are vehicles parked in locations that allow the operator to safely and effectively conduct pre-start checks eg. Adequate space around machines, adequate lighting in times of darkness?			
When inspections are carried out by operators, do they have clear instructions and competence to assess if a defect should result in a vehicle being stood down immediately?			

Where vehicle attachments lift people or objects, are thorough examinations undertaken by a competent person (e.g. your insurance company)?			
5. VEHICLE MOVEMENTS			
Question	**Yes**	**No**	**Actions**
Check that the need for REVERSING is kept to a minimum, and where reversing is necessary that it is undertaken safely and in safe areas			
Have drive-through, one-way systems been used, wherever possible to reduce the need for reversing?			
Where reversing areas are needed are they marked to be clear to both drivers and pedestrians?			
Are non-essential personnel excluded from areas where reversing occurs?			
If risk assessment shows site controls cannot be improved further and you need a banksman to direct reversing vehicles, are they adequately trained and visible?			
Are vehicle parking spaces designed to allow 'first move forward' wherever this is practicable?			
Are clear communication protocols in place and are they actively used to assist pedestrians and other vehicle operators to acknowledge presence in danger areas – eg. Visual and verbal communication			
Check that specific controls are in place for high risk areas of the site eg, excavation areas where heavy mobile plant may be operating in the same areas as smaller vehicles			
Does the site have clear rules to define where small vehicles are permitted to operate?			
Have pedestrian exclusion zones been considered and implemented in high risk areas?			
Do clear communication protocols exist for drivers of small vehicles to warn other vehicles of their presence in the work area?			
Where small vehicles have to operate in the proximity of heavy plant are additional safety devices fitted such as flashing beacons and 'buggy whip' flags fitted and used as standard?			
Excavation and stockpile areas in minerals operations are often ever changing in terms of extent and layout. Does the site have a robust system to review and amend risk assessments and controls when changes are made?			
6. LOADING AND UNLOADING ACTIVITIES			
Question	**Yes**	**No**	**Actions**

Check that there are safe systems for LOADING and UNLOADING operations			
Are loading/unloading operations carried out in an area away from passing traffic, pedestrians and others not involved in the loading/unloading operation?			
Are the load(s), the delivery vehicle(s) and the handling vehicle(s) compatible with each other?			
Are loading/unloading activities carried out on ground that is flat, firm and free from potholes?			
Are the vehicles braked and/or stabilised, as appropriate, to prevent unsafe movements during loading and unloading operations?			
Has the need for people to go on to the load area of the vehicle been eliminated where possible and if not is safe access provided and used?			
Is appropriate lifting equipment available for (un)loading vehicles?			
Is loading/unloading carried out so that, as far as possible, the load is spread evenly to avoid the vehicle or trailer becoming unstable?			
Do designated areas for tipping of incoming lorries have clearly defined exclusion zones for pedestrians and other vehicles?			
Are designated areas in place for drivers to tip off excess loads and are procedures in place to control this in the event of gross overloads that might impact the stability of the vehicle?			
Are safe areas provided for drivers to trim loads, sheet and un-sheet that are separated from passing traffic?			
Are checks made to ensure the load is adequately secured in line with the Department for Transport Code of Practice and not loaded beyond their capacity before the vehicle leaves the site?			
7. **DRIVER COMPETENCE**			
Question	**Yes**	**No**	**Actions**
Check that your selection and training procedures ensure that your drivers and other employees are capable of performing their work activities safely and responsibly			
Do drivers possess the necessary licences or certificates for the vehicles they are authorised to drive e.g. Front end loaders, site dumpers etc.?			
Do you check the previous experience of your drivers and assess them to ensure they are competent before they are assigned to work unsupervised?			
Do you provide site specific training on how to perform the job, and information about particular hazards, speed limits, the appropriate parking and loading areas, etc.?			

QNJAC Guidance

Do you have a planned programme of refresher training for drivers and others to ensure their continued competence?			
ALL 'NO' RESPONSES SHOULD BE ASSIGNED AN IMPROVEMENT ACTION. WHERE THIS IS NOT FELT POSSIBLE, THE ISSUE SHOULD BE ESCALATED TO THE SENIOR MANAGEMENT TEAM AND H&S SPECIALIST FOR FURTHER REVIEW.			

* 'Limited endorsement as HSE has contributed to the overall product, rather than leading its development.'