

Traffic Management





Do our Traffic Management controls stop fatalities??

- **Positive 2-way Communication, call up on radio, handheld 2-way**
- **Hi-vis clothing**
- **Light Vehicle identification (Hi-vis paint, Flags etc.)**
- **Traffic management procedures (1-way traffic, stop signs etc.)**
- **Separation of HV and LV traffic routes (often difficult on smaller quarry sites)**



All relies on this bloke !!

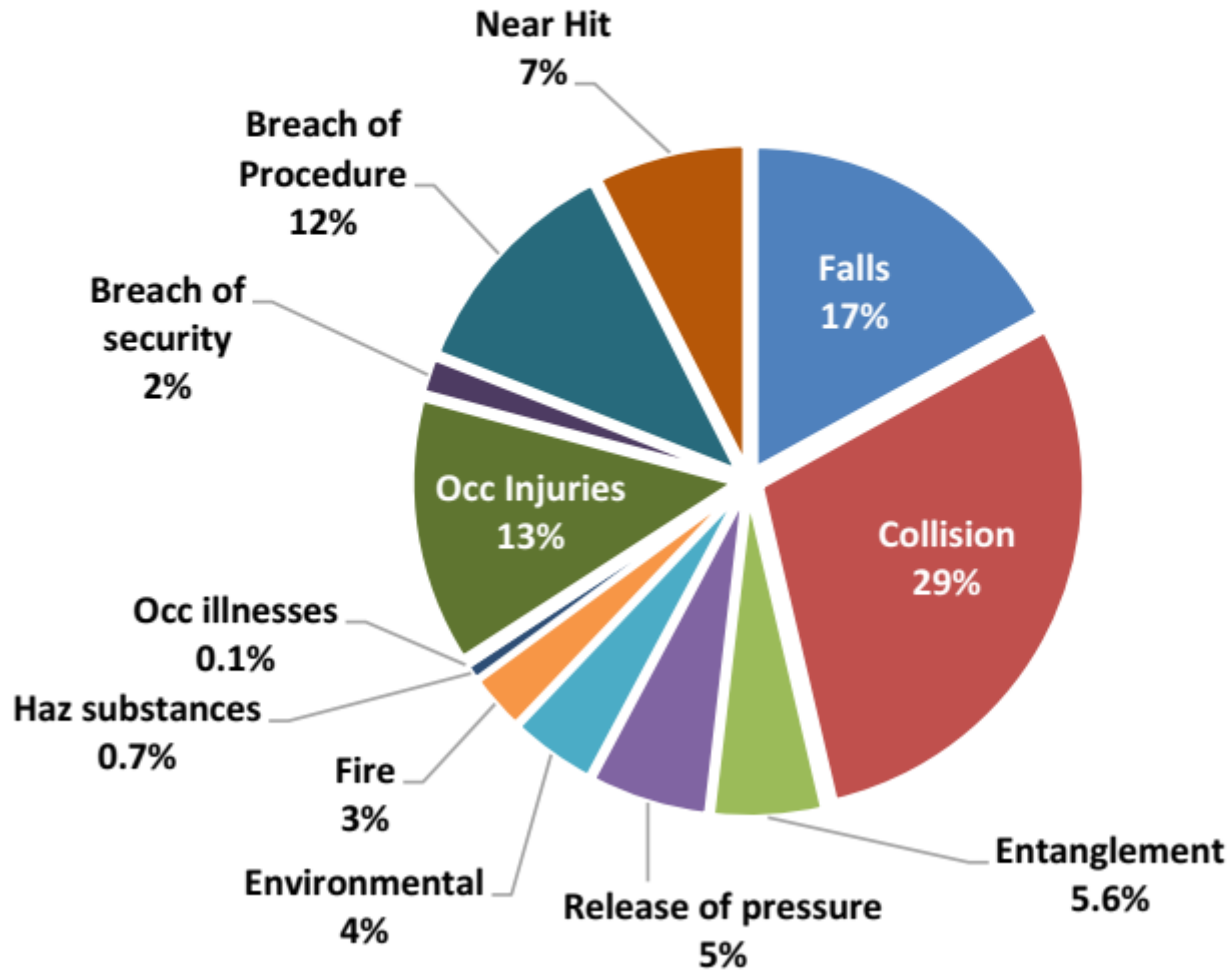
Its how you view the problem that often determines how successful you are in solving it.



Ask yourself ??

- *Why do LVs and pedestrians need to be in work areas while HVs are operating ?*
- *Why do pedestrians need to use haul roads ?*
- *Why do truck drivers need to get out of their trucks while loaders are operating ?*
- *Why do you need to drive the ute around the site while HVs are operating ?*
- *Why do visitors need to be in work areas while HVs are operating ?*

All categories Incidents July 2017 to Dec 2019



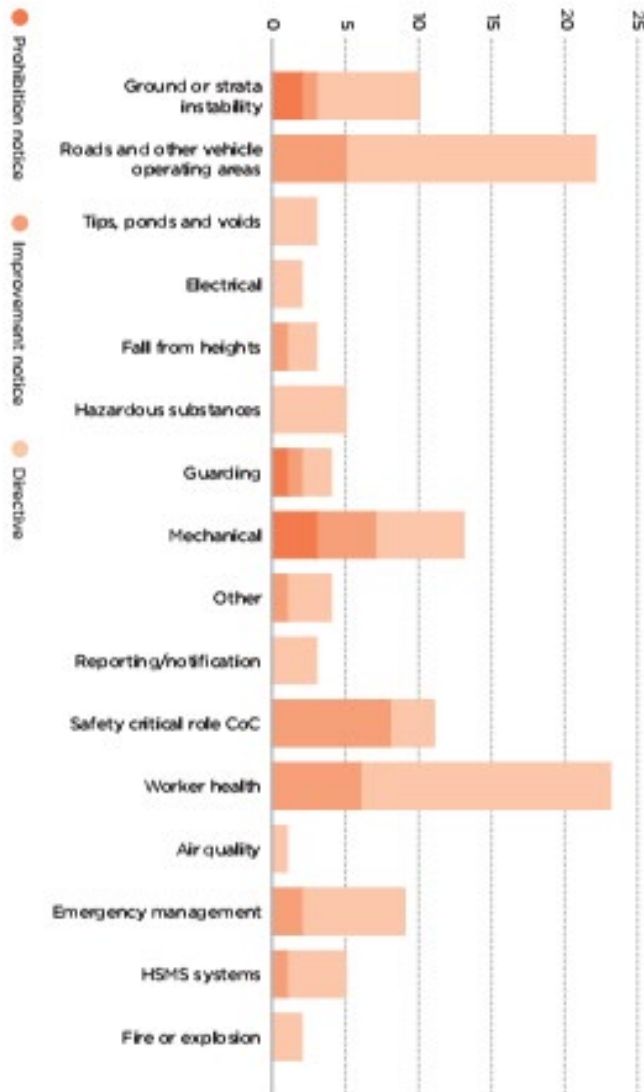
Collisions (700 incidents)

- **Loss of control of vehicle - 39%**
- **Vehicle collision - 57%**
- **Person hit by vehicle - 4%**



Inspectorate Quarterly Report

July 19 – Sept 19



Industry should take note of the data which dispels any notion that the industry is improving and becoming safer. Over the last few years the data shows an increase of notifiable events and more injuries. That there have been no fatalities is a result of luck. There have been a number of events which resulted in significant injuries and also a series of events where all controls had failed and workers only avoided serious harm or death through good fortune.

Health and Safety at Work (Mining Operations and Quarrying Operations) Regulations 2016

Regulation 80

Principal hazard management plans for roads and other vehicle operating areas



Regulation 80 – Traffic Mgmt Plan

- **Design & Layout of roads**
- **Risk in vehicle operating areas**
- **Interaction of vehicles and people**
- **Operation of load shifting equipment**
- **Prohibited zones**
- **Mobile plant hazards**
- **Construction of roads**
- **Parking**
- **Maintenance of mobile plant**

Site design & layout

- **Risk assessment**
- **Site geology/Development staging**
- **Size/type of equipment used**
- **Location of plant/stockpile etc.**
- **Weather**
- **Final design & end use**



Equipment

- **Selection – Safety features**
Ergonomics
Size
- **Operation – SOP**
Training/Induction
Collision avoidance
- **Maintenance – OEM Manuals**
Routine maintenance
Pre-start checks



Road construction & maintenance

- **Weather and environmental/drainage**
- **Road life and usage/construction materials**
- **Quarry Plan parameters**
- **Single or two lane**



Road construction & maintenance

- **Segregation of light and heavy vehicles**
- **Gradient, camber and length of haul roads**
- **Edge protection and bunding**
- **Intersections**



NOTE:
 *Purga Quarry has steep roads on site, some are 1-8 grades. Drive accordingly!
 * Speed limit for "all" the site is 20km/h unless signed.
 * All Earthmoving equipment has right of way over all vehicles!

Purga Quarry Traffic Plan 2009

- Assembly Areas
- Haul Road
- Sales Road
- One-Way Traffic Only
- Light Vehicle Access road
- Fire Extinguishers



Haul road rules of thumb

- **2-lane = 3 times width of largest vehicle**
- **1-lane = 1 1/2 times width of largest vehicle**
- **Gradient recommended 10% (1:10)**
- **Additional controls required when above 14% (1:7)**

Vehicle interaction



- **Overtaking 7 right-of-way**
- **Traffic flow**
- **Collision avoidance**

Exclusions & separation

- **Visitors and/or Employee parking area**
- **Designated tarping and tip-off areas**
- **General parking on site**
- **Pedestrians**
- **Power lines**



Monitoring effectiveness & inspections

- **Workplace inspection**
- **Behaviour monitoring**
- **Refresher training**
- **Vehicle inspections**
- **Regularly update plan**



Resources

- **Traffic Management checklist**
- **WorkSafe website**
<https://worksafe.govt.nz/>
- **Minex website**
<https://www.minex.org.nz/>

Traffic management in mines and quarries



MinEx
Health and Safety in NZ extractives



Questions ??

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