



# SPRING QUARRY SAFETY CAMPAIGN 2021

**1ST - 12TH MARCH 2021**



**#BESEEN&BESAFE**

# **TRAFFIC MANAGEMENT PLANS**

# Agenda

## Site Traffic Management Plan

- Introduction – Legislative Requirements (*General Application & Quarries Regulations*)
- Site Traffic Management Plan
- Preparation
- Vehicles Entering and Leaving the Quarry
- Pedestrians
- Contractors
- Developing a Traffic Management Plan – Key Points
- Developing a Traffic Management Plan – Controls



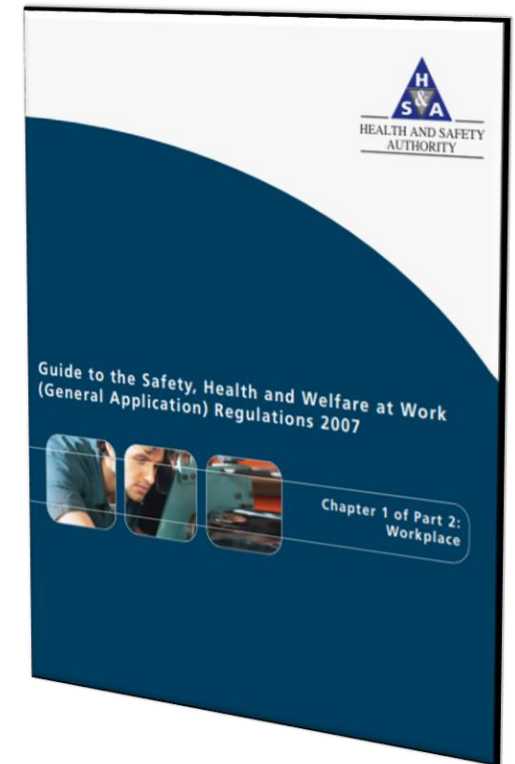
# Introduction – Legislative Requirements

Guide to the Safety, Health and Welfare at Work (General Application) Regulations 2007 Chapter 1 of Part 2: Workplace

## ***Regulation 14: Movement of pedestrians and vehicles in danger areas***

14. An employer shall ensure that—

- (a) outdoor and indoor places of work are organised in such a way that pedestrians and vehicles can circulate in a safe manner,



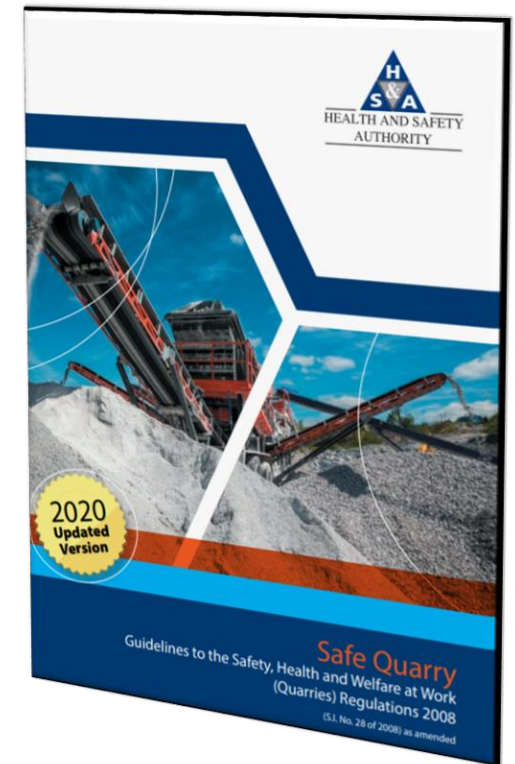
# Introduction – Legislative Requirements

Guide to the Safety, Health and Welfare at Work (Quarries) Regulations 2008  
Part 3: General Safety Provisions

## **Regulation 22: Traffic Routes**

The operator shall ensure that –

- (a) traffic routes, including stairs, fixed ladders, loading bays and ramps, are **designed, located, laid out and made negotiable** to ensure easy, safe and appropriate access in such a way as not to endanger persons working in the vicinity of these traffic routes,
- (b) routes used for pedestrian or goods traffic, or both, including those used for loading and unloading, **are dimensioned in accordance with the number of potential users** and the type of activity concerned,



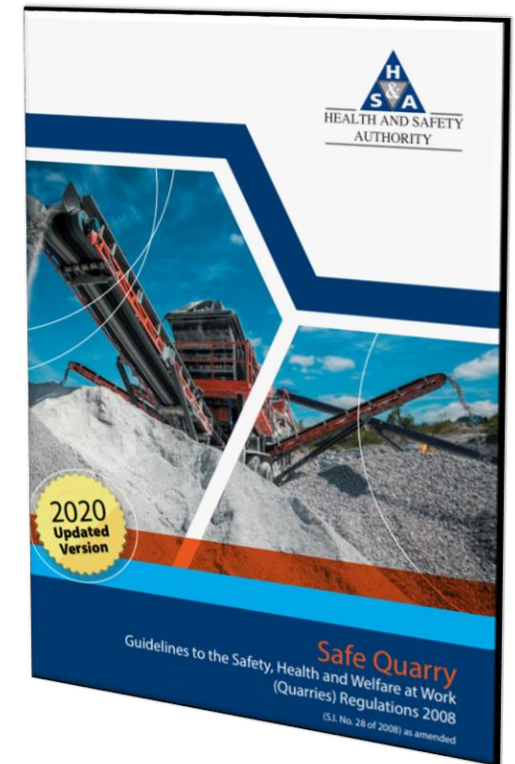
# Introduction – Legislative Requirements

Guide to the Safety, Health and Welfare at Work (Quarries) Regulations 2008  
Part 3: General Safety Provisions

## **Regulation 22: Traffic Routes**

The operator shall ensure that –

- (c) if means of transport are used on traffic routes, a sufficient safety clearance or adequate protective devices are provided for other quarry users, and routes are clearly marked, regularly checked and properly maintained,
- (d) sufficient clearance is allowed between vehicle traffic routes and doors, gates, passages for pedestrians, corridors and staircases, and
- (e) traffic routes are clearly identified for the protection of persons at work.





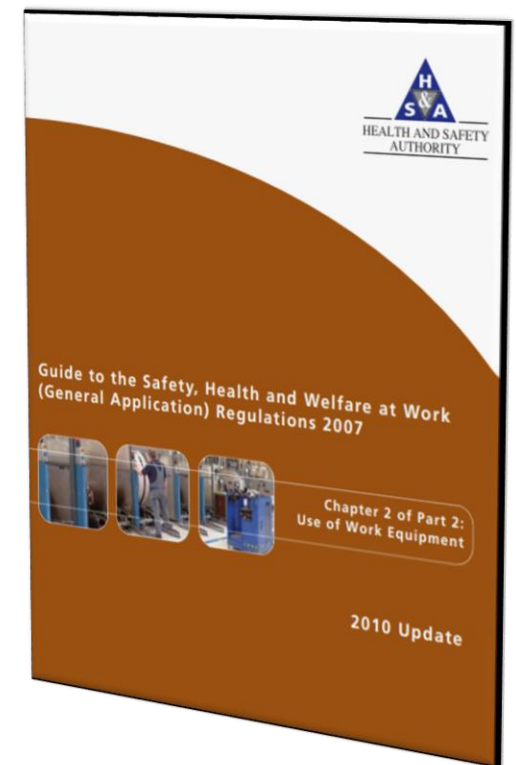
# Introduction – Legislative Requirements

Guide to the Safety, Health and Welfare at Work (General Application) Regulations  
2007 Chapter 2 of Part 2: Use of Work Equipment 2010 Update

## Regulation 41: Traffic rules for mobile work equipment

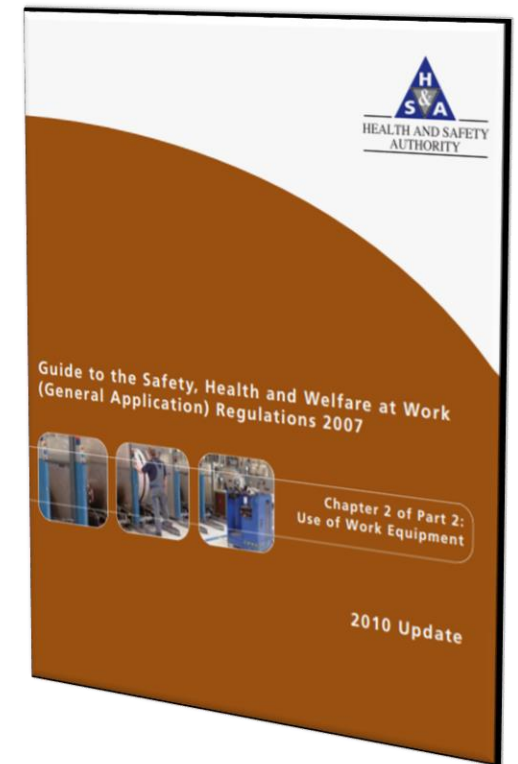
41. An employer shall ensure that—

*(a) if work equipment is moving around in a work area,  
appropriate traffic rules are drawn up and followed,*



# Introduction – Legislative Requirements

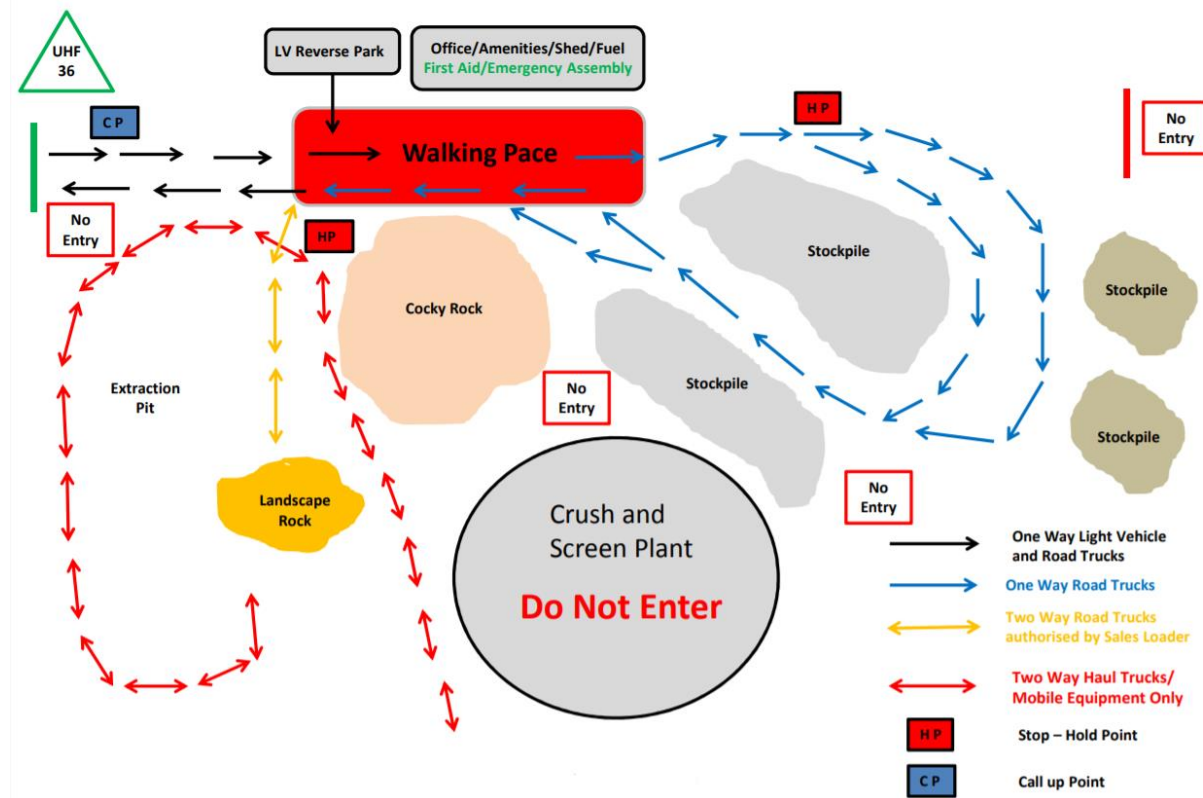
*(b) organisational measures are taken to prevent employees on foot coming within the area of operation of self-propelled work equipment and, if work can be done properly only if employees on foot are present, appropriate measures are taken to prevent them from being injured by the equipment,*



## Introduction

### Site Traffic Management Plan

- No generic traffic management plan for a quarry;
- Must be site specific



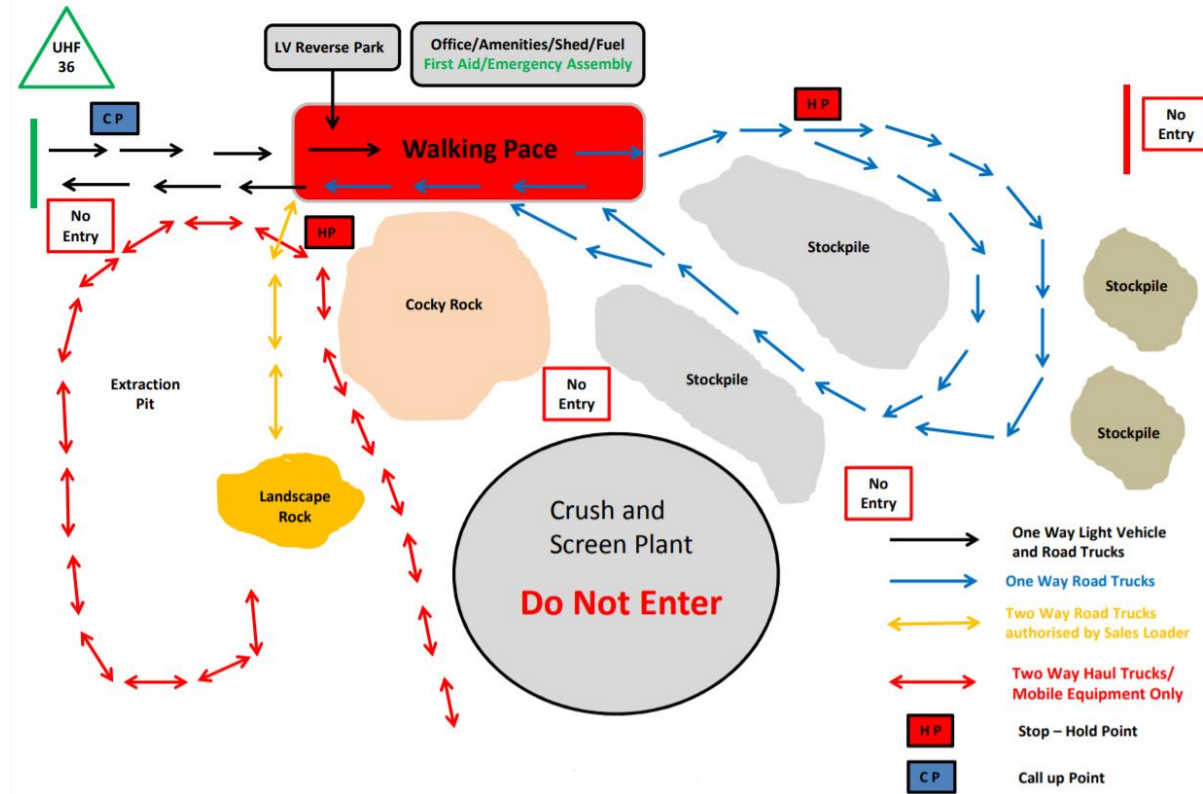
**Best Practice:** Engage someone with local knowledge of your quarry operations to assist in preparing and developing the traffic management plan in consultation with those on site.



## Preparation

### Site Traffic Management Plan

- Have an up-to-date plan
- Identify potential and existing entry and exit points
- Calculate the number of trucks entering and leaving
- List the mobile equipment that is currently in use

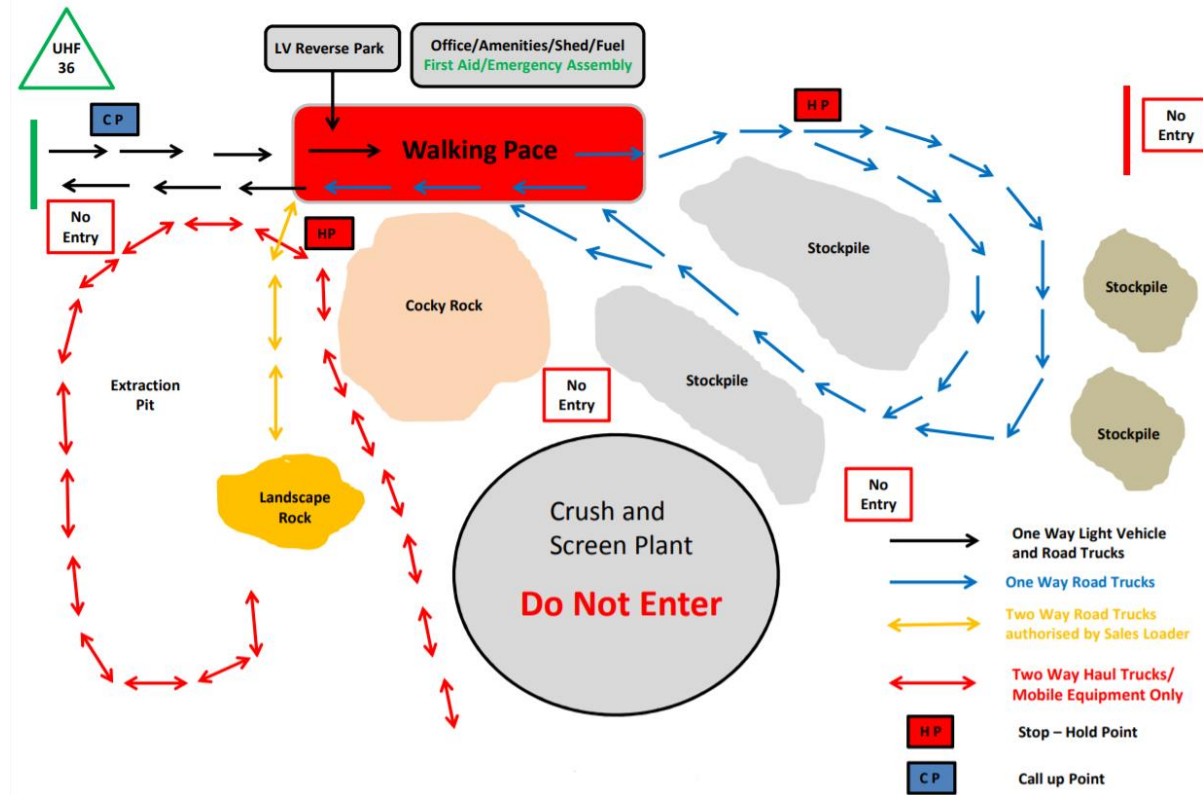


## Preparation

### Site Traffic Management Plan

List the operations and locations at the quarry involving vehicles, e.g.:

- Drilling and Blasting
- Mobile Crushing
- Stockpiles
- Ready Mix
- Black Top
- Block Making
- Small Loads Area
- Sales Yard
- Staff Car Park
- Visitors Car Pack
- Workshops
- Fuelling Bays
- Weighbridge & Office
- Canteen and Changing Area



**Look-ahead:** Identify planned working areas for the next 12 and 24 months or even longer.



# Vehicles Entering and Leaving the Quarry

- Haulage trucks enter and leave the quarry using separate entry and exit points.
- Allows trucks to enter and leave without meeting traffic travelling in the opposite direction.

This may not be possible, however by planning the quarry workings it is possible to minimise two-way traffic, reversing operations and avoidance of potential bottlenecks.



# Vehicles Entering and Leaving the Quarry

When considering the volume of trucks entering the quarry on a daily basis, ensure you consider how the trucks are distributed around the quarry, i.e.

- % at the stockpiles
  - % loading directly at the face
  - % loading at the Mobile Crusher Area
  - % loading at the Ready Mix or Block Plant
  - % delivering equipment or materials
- etc...





## Pedestrians

In relation to pedestrians the following requirements need to be implemented:

- safe and suitable pedestrian access routes provided
- work related vehicles and pedestrians are kept apart
- pedestrian routes are organized and controlled

The first thing to consider is if there is a requirement for pedestrians or can they be eliminated from an area.



**Hazard** – truck driver alighting from their vehicle whilst being loaded in the quarry





## Pedestrians

- Can they be segregated from the traffic route?
- If they have to cross a traffic route, can suitable crossings be installed?
- Are all pedestrians required to wear Hi-Viz clothing that will identify them to vehicle operators?



If workers bring private vehicles to the quarry, where do they park and how do they travel from their vehicle to their workplace/meeting place/changing area?

# Pedestrians

Are canteens, workshops, offices, changing rooms or other places where pedestrians are present, close to traffic routes?

- Can traffic be diverted from pedestrian entrances?
- Is there adequate signage for both pedestrians and drivers?
- Can concave/convex mirrors or other visibility aids provide warning for drivers and pedestrians?
- Is there a suitable crossing (if required)?
- Are speed restrictions in place and enforced?





## Pedestrians – Questions YOU should ASK

- Can they travel there safely?
- Can they be segregated from the traffic routes?
- Is there a designated safe area for loading small load customers?

***\*Remember that these people may not be familiar with the quarry and how it operates, the last thing you want is to have them walking around the quarry and entering traffic routes unsupervised.***

Are there clear directions for customers to follow to the office?

- Is there a designated safe area for loading small load customers?
- Can they remain in their vehicles at all times?



## Contractors

### Questions YOU should ASK?

- Where do they park?
- Do they travel to locations within the quarry in their vehicles?
- Have they had induction training?
- Are their vehicles suitable for travelling the quarry traffic route?
- Are their vehicles fitted with amber warning beacons?
- Are they restricted as to where they can travel on foot?
- Do they have suitable Hi-Viz clothing?
- If they are operating vehicles in the quarry, how do they travel to and from them?





## Developing a Traffic Management Plan – Key Points

- The Traffic Management Plan is not a one-off exercise;
- Reviewed and updated as required
- May not be possible to establish one-way traffic systems, or
- Fully avoid reversing activities.
- Need to plan future workings to create haul routes and traffic routes.
- Avoid travelling close to any pedestrian areas or ancillary plants
- Plan how this can be accomplished in the future.

## Developing a Traffic Management Plan – Key Points

- Traffic for ancillary plants should leave the main haul route
- Have an individual one-way circuit for those vehicles
- Safely re-join the main traffic route once loaded or unloaded at the ancillary plant.
- Load trucks individually on a dedicated traffic route
- Safely re-join the main traffic route.
- Have other trucks park in a safe waiting area until it is time for them to load.
- Maintained roads in good condition,
- Adequately drained and free from potholes or obstructions,
- Gradients should not be excessive



# Developing a Traffic Management Plan - Controls

## REMEMBER Pedestrians include:

- All employees
- All contractors
- All hauliers
- All delivery drivers
- All official visitors (including enforcement officers/regulators)
- All members of the public: Customers/visitors to site Persons using public rights of way that cross through operational areas of quarries (this category might also include cyclists and horse riders) Persons accidentally or deliberately trespassing
- **YOU!**

## Developing a Traffic Management Plan - Controls

- Plan how to eliminate pedestrians from the traffic routes
- Look at control measures to protect pedestrians who are in close proximity to vehicles.

There are a number of control measures that can be easily implemented within the Traffic Management Plan to ensure the safe movement of vehicles and pedestrians.





# Developing a Traffic Management Plan - Controls

These control measures can include:

- Good signage in relation to rights of way, priority traffic,
- Clear speed limits that are enforceable
- Ensuring vehicle operators are trained and hold appropriate licences
- Warning of steep gradients, tight bends, etc.
- Separating traffic on haulage roads using physical barriers
- Designing haul roads that are well drained, free from potholes, with acceptable gradients and have adequate edge protection for the size of vehicles using the road



# Developing a Traffic Management Plan - Controls

These control measures can include:

- Providing specific pedestrian routes with barriers
- Where barriers are not practical, providing clearly indicated pedestrian routes
- Reduced speed limits where pedestrians may be present
- Provision of dedicated crossing points for pedestrians
- Maintaining quarry vehicles in a safe condition and carrying out regular maintenance
- Ensuring vehicles follow the designated route and don't travel in the wrong direction
- Ensuring Hi-Viz clothing is worn by all and maintained or regularly replaced to ensure it is effective
- Providing training to workers, contractors and, where necessary, visitors to the quarry





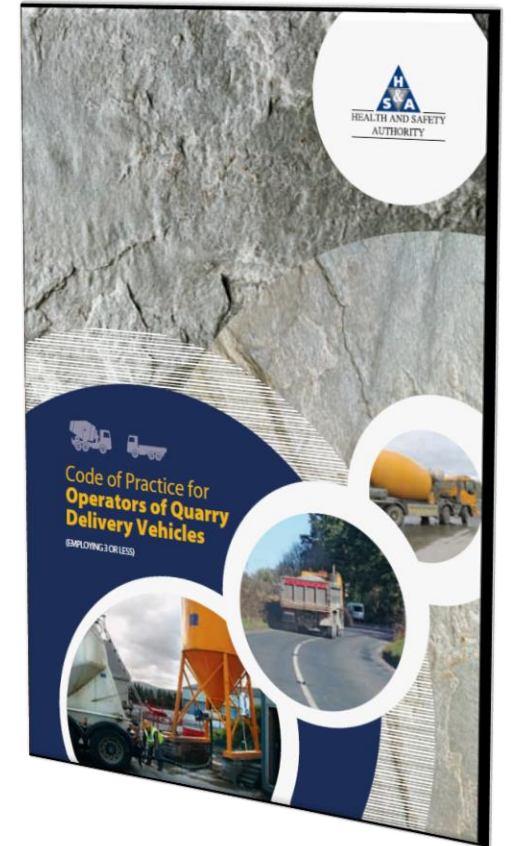
# Resources – inappropriate resources and controls



# The END

Further information is available from the HSA:

- Construction Site Traffic Management Plan (CSTMP) Guidance document.
- COP for the Operators of Quarry Delivery Vehicles Employing Three or Less



This PowerPoint Toolbox Talk has been prepared by ICF to serve as guidance only, and ICF does not accept any responsibility or liability for any errors, inaccuracies or omissions which may have occurred inadvertently.

NB: Legislation requires companies to carry out their own risk assessment.