

## OP03 – Blasting and Vibration

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### What is this?

The purpose of this document is to outline the operational requirements for controlling blasting, air overpressure, ground vibration and blasting fumes.

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### What does the responsible manager need to do?

The responsible manager must ensure that:

- A competent explosives supervisor has been appointed by the operator under Regulation 25 of Quarries Regulations 1999. (This may be the responsible manager or even the operator or other individual as defined within the Regulation)
- A set of suitable, well publicised shotfiring rules are in place. (These are a set of practical operating procedures which are in place to protect the workforce and public)
- The rules will need to include monitoring arrangements to cover ground vibration and air overpressure and the direct notification of local residents who may be affected
- Site hazard plan is displayed
- Relevant personnel involved in the blasting activities are either authorised or appointed depending upon their particular role
- All relevant licenses (ie acquire/keep RCA and store) are valid both in date, address and UN numbers
- Comply with the relevant conditions within the planning consent pursuant to blasting activities
- A valid blast specification has been prepared by the relevant competent individual
- The explosives supervisor has taken account of the maximum instantaneous charge together with experience from previous blasts, any unusual circumstances which are present or likely to arise, and the design of the excavation
- The explosives supervisor has taken due account of the environmental impact of the initiation system and sequence
- Regression analysis may be required to aid the blast design in sensitive areas outside the quarry boundary
- Any change required to the blasting specification must be authorised by its author
- Blasting is prohibited when there is not enough visibility to carry out work safely. In addition low cloud and wind speed/direction will have a direct result on air overpressure. The effects of the weather on blasting activities should be addressed in the shotfiring rules
- Timing of the blast will be influenced by the nuisance it may create to neighbours
- The explosives supervisor should check that the equipment used in blasting operations is suitable and safe
- There must be inspection and maintenance arrangements in the scheme required under Regulation 12 to deal with equipment provided for blasting operations



- The explosives supervisor must not authorise the use of ANFO in wet holes unless appropriate measures are in place
- Any site mixing of ANFO is undertaken in such a way to minimise the production of blasting fumes
- Arrangements are in place with the manufacturers to cater for the disposal of empty cases and deteriorated explosives
- Any complaints are professionally dealt with in accordance with the environmental complaint handling procedure
- Sufficient warning signs should be in place
- Records are held of all monitoring, incidents and complaints.

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### What does the employee need to do?

The employee (shotfirer) must:

- Be appointed pursuant to Regulation 25(2)(a)(ii) of the Quarries Regulations 1999
- Possess sufficient practical and theoretical knowledge and experience to perform a full range of duties. They must have completed a course of training and undertake CPD
- Ensure that the shotfiring operations are conducted in accordance with the rules and blasting specification. If it is not possible to conform to the specification, shotfiring operations should be suspended until any change has been authorised by its author
- Be fully satisfied that each shothole has been drilled and charged in accordance with the blasting specification
- Report any incidents resulting from blasting activities to the explosives supervisor immediately
- Fully understand all rules and procedures.

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### Associated documentation

#### EMS Section

- Operational Control

#### Environmental Procedure

- EP08 – Complaint Handling

#### Forms

- EF03 – Internal Communication
- EF15 – Incident Investigation

