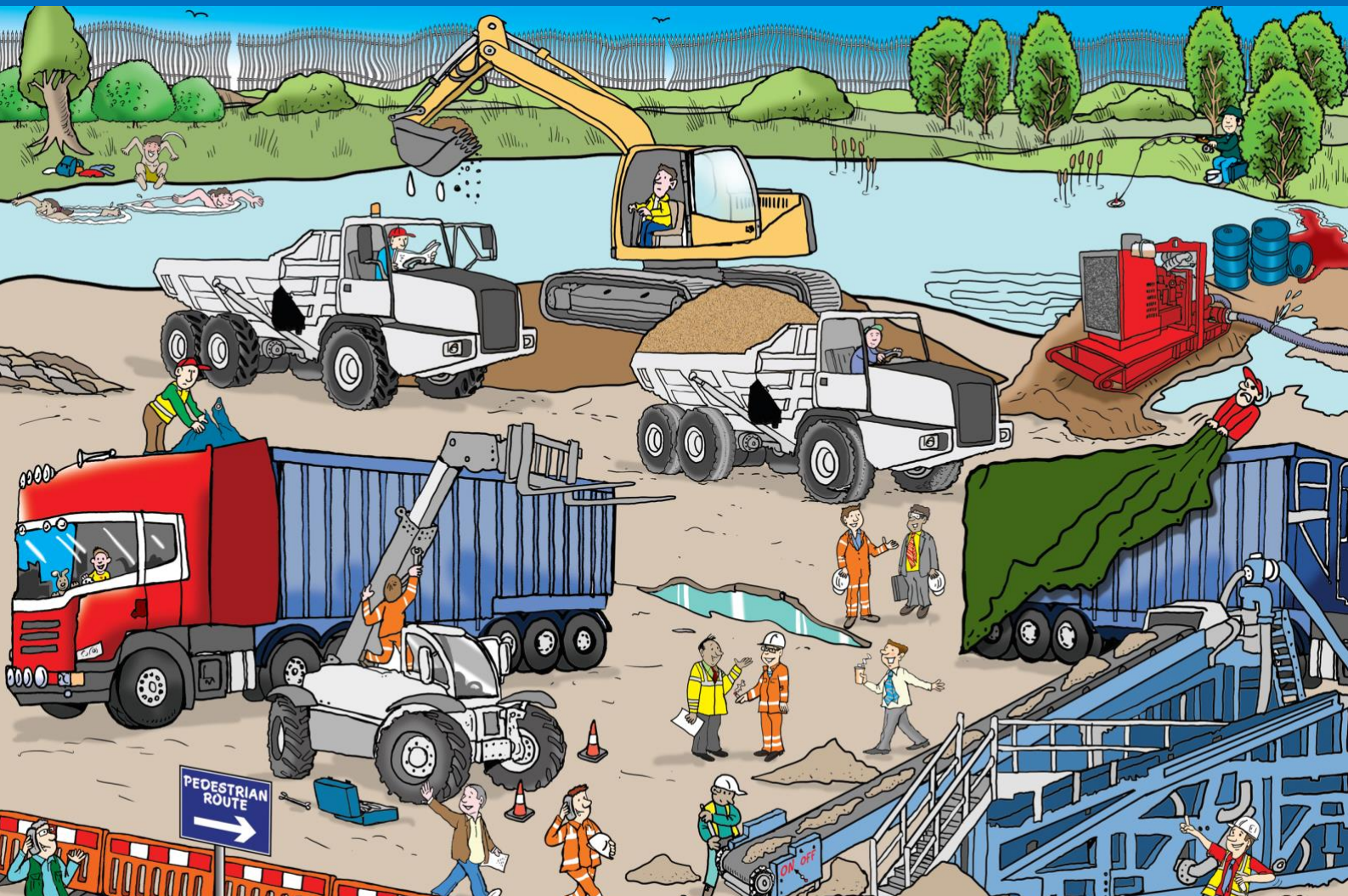


# Level 6 Diploma in Safety, Health and Environmental Management in Mineral Product Operations



## The need for competence

Under many pieces of legislation the HSE state the need for training and competence in the roles performed at operating sites. A good example is this is Quarries Regulations 1999 which states

‘The (*Quarry*) operator shall ensure that no person undertakes any work at the quarry unless –

(a) that person is either competent to do that work or he does so under the instruction and supervision of some other person who is competent to give instruction in and to supervise the doing of that work for the purpose of training him; and

(b) a sufficient number of persons with the requisite competence to perform the tasks assigned to them are present’ *Regulation 9 Quarries Regulations*

The HSE within the Quarries Regulations guidance section they state that ‘Competence can be described as the combination of training, skills, experience, knowledge and other qualities that a person has and their ability to apply them to perform a task safely. Other factors, such as attitude and physical ability, can also affect someone’s competence’

Also within the guidance the HSE state that – ‘The risk assessments and National Occupational Standards (NOS) can help to determine the health and safety competencies needed for particular jobs. By comparing the competencies needed with those which people already have, managers can determine what additional skills are required and how these can be achieved, for example through training and coaching’.

## National Vocational Qualification Levels

Level	Equivalent to:	Target Role in Extractives
Level 7	Masters Degree, MA, M.Sc, MPhd	Director, Area/ General Manager
Level 6	Bachelors Degree	Site/ Quarry Manager
Level 5	Foundation Degree	
Level 4	Certificate of higher education	Assistant Managers/ Supervisors
Level 3	A level	Foreman
Level 2	GCSE Grades A-C	Operative
Level 1	GCSE Grades D-G	Entry level introduction

## Level 6 Diploma in Safety, Health and Environmental Management in Mineral Product Operations

The level Six Diploma is aimed at people within direct management of the site.

This will normally include experienced quarry managers (pathway 2 and 3) Area managers, Directors and Works managers for minerals production factories.

The qualification is built up of two parts

- (a) **Demonstration of knowledge**, this is demonstrated through a two-day workshop plus completion of further knowledge questions, which is marked by the assessor and the candidate is given feedback
- (b) **Performance related evidence** - The candidate will be demonstrating exposure they have had (but not exclusively to criteria listed below). It is the assessors role to use various methods to understand compliance with the criteria.

In all pathways candidates must have been directly involved and possess evidence in:

- Audits
- Inspections
- Risk management
- Aspect and impacts review
- Management of SHE systems
- Accident and incident investigations
- Management of data, analysis, Capex approval
- Contractor management
- Identification of training for them and their team, liaising with professionals with regards to training

## Different Pathways

Pathway 1	Pathway 2	Pathway 3
General pathway for all, including no quarry personnel	Suggested for sand gravel operations	Suggested for hardrock quarry operations
All units except 6, 7, 14 and 15	All units except 7 and 15	All units

## Unit SHE01 - Contribute to and Promote a Positive Safety, Health and Environmental Culture

The different types of evidence that would be gathered for this unit would consist of the following

- SHE committee meetings
- Personal development plans
- Contractor inductions
- Daily briefs (video)
- Toolbox talks
- Maintenance meeting that are documented
- Video of the learner talking through how they contribute SHE culture, this might include:
- Notice boards, visitor inductions, safety briefs, Safety week, KPI boards

## Unit SHE02 - Identify and Implement Safety, Health and Environmental Training

The different types of evidence that would be gathered for this unit would consist of the following

- Video of how you liaise HR functions of your business to arrange training
- Video of systems used to identify training requirements for the candidate and his or her team
- Evidence of training received in the form of certificates and Toolbox talks for the last two years for candidate and their teams
- Contractor inductions carried out and the system used within the organisation to highlight if the contractor is able and competent.

## Unit SHE03 - Identify, Recommend and Support the Implementation of Safety, Health and Environmental Improvements

This unit is for the candidate to be able to demonstrate 12 SHE improvements that they have carried out whilst with the company over the last two years.

The 12 SHE improvements have to consist of a minimum of 3 Safety improvements, 3 Health improvements and 3 Environmental improvements that they have carried out.

The improvement evidence is usually gathered in the form of the storyboards where the candidate describes an improvement with the aid of photos and screen shots that they have been involved with in from start to finish.

This evidence can also be captured by video and photos by the assessor with the candidates giving a narrative of how the improvement was made.





## Unit SHE04 - Identify Health and Safety Hazards and Environmental Aspects and Reduce Risks/ Impacts

The candidate will provide good risk assessments that they have written or authorised which cover the following criteria:

- Ground conditions
- Manual Handling
- Substances
- Working at heights
- Workplace layout
- Transport
- Machinery and guarding
- Working practices

For the Environmental performance related evidence the candidate would generally submit the review of the sites Aspect and impacts.

If this is not consistent with the company's strategy with management of the Environmental impact that the site as on the Environment an alternative way is to conduct an Environmental risk assessment for Aspects that the site has.

## Unit SHE06 - Quarrying Safety, Health and Environmental Aspects

Be able to apply quarry specific safety, health and environmental aspects evidence that is required for this unit would comprise of the following evidence being gathered:

- Excavation and tip rules
- Risk assessments pertaining specifically to the extraction area
- Quarry inspection for faces, haul roads, lagoons, tips, stockpiles (This includes assessor walking of the quarry asking quarry specific questions around how the inspection is conducted, what are they looking for and at )
- Aspect and impacts assessment
- Contractor induction for the quarry
- Video of the candidate talking through the quarry plan
- Evidence of inspection which required remedial action

**P2**  
**Additional**  
**Unit**

**P3**  
**Additional**  
**Unit**

## Unit SHE07 - Knowledge of Drilling and Blasting in Quarries

This evidence is gathered by a candidate completing a knowledge workbook on drilling and blasting in quarries, the Assessor will then review the workbook with the candidate.

**P3**  
**Additional**  
**Unit**



## Unit SHE08 - Manage Health and Safety Risk and Environmental Aspect Assessments



Be able to identify and control health and safety hazards and risks and environmental aspects and impacts

Evidence that will be provided by the candidate is normally in the form of storyboard of how they manage the process of risk management and Environmental management systems. This can be alternatively captured in a video with the candidate talking through the processes that they undertake.

Types of evidence written into the story board are:

- The risk control hierarchy
- Risk control register
- Ensuring candidates who are conducting risk assessments have the correct qualifications ie IOSH managing safely NEBOSH or risk assessment and SSOW of work certificates of training
- Stop assessments / dynamic risk assessments conducted
- Review of aspects and impacts, management review of Environmental management systems
- Toolbox talks delivered for Environmental training



## Unit SHE09 - Investigate and Evaluate Safety, Health and Environmental Incidents

Be able to investigate and evaluate safety, health and environmental incidents

The evidence required for this unit will require the candidate to demonstrate that they have been involved in three different types of investigations

- a) Incident investigations
- b) Near hit investigation or high potential investigation
- c) Environmental incident investigation

The evidence will need to demonstrate full investigations having taking place:

- Photographs
- Witness statements
- Review of the incident findings by senior management review
- Risk assessment review
- Root cause analysis
- Improvement recommendations
- Improvements being carried out



## Unit SHE10 - Manage Effective Safety, Health and Environmental Systems

Be able to manage effective safety, health and environmental systems

The candidate will need to construct a storyboard detailing how they effectively manage SHE systems. The storyboard will use screen shots and photos of physical evidence of how they meet the criteria.

- Environmental inspections
- Environmental incidents and emergencies
- Water management
- Minimising emissions to air
- Deliveries to site
- Material storage
- Waste management
- Recording or controlling special waste transfer
- Compliance with Environmental policies
- Safe use of Machinery/plant/equipment through Safe systems of work and training provided and risk assessment
- Traffic management
- Handling materials either manually or by use of materials
- Management of contractors
- Management of PPE including storage, issuing and correct use of PPE
- Hazardous Substances
- First aid
- Emergencies for health and Safety (fire drills etc are good evidence for this)
- Improvements made from inspections
- Improvements made from SHE audits

Evidence uploaded to the portfolio from unit 3 will also be uploaded into unit 10 as evidence

## Unit SHE11 - Manage the Promotion of Safety, Health and Environmental Culture and Training

Be able to manage the safety, health and environmental culture and training

Evidence gathered in units 1 and 2 will be uploaded into unit 11, these include:

- SHE committee meetings
- Personal development plans
- Contractor inductions
- Daily briefs (video)
- Toolbox talks
- Maintenance meeting that are documented
- Video of the learner talking through how they contribute SHE culture, this might include:
  - Notice boards, visitor inductions, safety briefs, Safety week, KPI boards
  - Site improvement plans
  - Video of how you liaise HR functions of your business to arrange training
  - Video of systems used to identify training requirements for the candidate and his or her team
  - Evidence of training received in the form of certificates and Toolbox talks for the last two years for candidate and their teams
  - Contractor inductions carried out and the system used within the organisation to highlight if the contractor is able and competent

In addition to this evidence the candidate will need to evidence their own up to date CPD.

## Unit SHE12 - Provide Information for Decision Making in Mineral Products Operations

Be able to provide information for decision making in mineral products operations.

The candidate will construct a storyboard using photos and screen shots of evidence that they have used to make informed decisions from a variety of different sources

In the evidence the candidate will demonstrate how they have gained approval from senior management for approval, how this information is then shared. Additional evidence that will/can be used will include:

- Key performance indicators
- Analysis of OEE data (if used)
- Extrapolation of information from systems
- CAPEX recommendations
- E mails
- Demonstration of sharing best practice
- Management of operations management systems
- Company initiatives to drive improvements

## Unit SHE13 - Principles of Gathering Analysing and Disseminating Information in Mineral Products Operations

Unit 13 is the demonstration of the principles of gathering analysing and disseminating information in mineral product operations. Evidence supplied in unit 12 will be used to demonstrate knowledge for this unit.

## Unit SHE14 - Manage Quarrying Safety, Health and Environmental Aspects

The candidate will demonstrate by means of storyboard using photos and screen shot how they manage the quarry operations. The storyboard evidence will describe how they use the following quarry management techniques to make improvement for the quarry operations:

- Quarry inspections
- Risk assessments
- Environmental aspects and impacts review
- Geotechnical assessments
- Liaison committee meetings
- Environmental inspections
- Monitor, review and evaluate the improvements made
- Promote quarry specific: safety, health and environmental issues Promote quarry specific: safety, health and environmental good practice
- Promote quarry specific: safety, health and environmental improvements
- Assess health, safety and environmental training needs for quarry personnel
- Develop a training plan for staff and all other individuals in own area of responsibility. Implement the developed training plan
- Monitor, review and evaluate the effectiveness of the implemented training plan
- Assess own quarry related safety, health and environmental training needs
- Arrange training to meet own needs

Evidence from units 4,6,8,10 and 11 will also be referenced into this unit

**P2**  
**Additional**  
**Unit**

**P3**  
**Additional**  
**Unit**

## Unit SHE15 - Manage Quarry Drilling and Blasting

Be able to manage the quarry drilling and blasting process

For **Unit 15** candidates develop a storyboard for how they manage the blasting process at their site

They should use the following evidence criteria

Describe Shotfiring/Explosives Supervisor's process and our company paperwork to guide and develop a plan of work. The plan of work will include photos of evidence for the following:

- Work instruction to prepare work area
- Area preparation for drilling free from quarry vehicles and other quarry workings
- Induction of the driller
- Clearance to work for the driller
- Competency checks, training, authorisations, equipment worthiness, risk assessments
- Point of work risk assessments or risk assessments/stop assessments
- COSHH assessments
- Daily plant report for blast holes
- Work subcontracted to explosives company
- Drillers blast hole log
- Face profiling information
- Explosives, Shot firers and sentries roles and responsibilities and letters of appointment
- Vibrograph information and locations
- Map of the quarry detailing, blast danger zones, firing point, sentries positioning, explosives route, direction of the blast.
- Transportation prestart check list
- Blasts logged into relevant management system
- Explosives and all relevant documentation
- Connection sequence logged by explosives supervisor
- Drill hole charge documents angle and azimuth , placement of detonators in the hole
- Pre blast specification document
- Post blast inspections
- Blasting audits carried out by internal or external parties



# Frequently asked questions - VQ

## How long will the Level 6 take to complete?

The average time frame for a candidate to complete a L6 with Safety Coaching is 26 weeks.

## How much work is involved from the candidate

It is upto the candidate to 'drive' their qualification, as part of visit planning the assessor will inform the candidate what evidence will be required for the next scheduled assessment visit

## How long does each assessment visit take and how many visits are required?

This really depends on the candidate and their level of organisation for the visit. Most visits start at around 08.30am and are completed for around 3pm. The number of visits varies according to the candidate, average is 5 to 6

## Does the qualification work for operations other than Quarries?

Yes the candidate should complete pathway 1 – this has no quarrying assessment criteria within it

