**General Site Maintenance**

**Aim**

The aim of these procedures is to ensure that general site maintenance is carried out across all sites.

* Good Housekeeping
* Maintaining First Aid Boxes
* Boundary Fence Inspection
* Incidents of Vandalism
* Vegetation Management
* Quarry Energy Save

**Good Housekeeping**

On a regular basis all areas around the site will be assessed and any areas that require attention should be addressed immediately. On a regular basis the site manager will conduct a site inspection to ensure good housekeeping are being achieved.

The critical areas are that where electrical equipment is present:

* Substations.
* Any switchgear.
* Control rooms.
* Workshops.
* Canteen/ Mess rooms.
* Oil & Fuel storage areas.
* Offices.

Where possible all the above areas should be free of any flammable material, (Paper, card, plastics, fuels, and oils etc). If flammable materials are to be stored in the areas above, they should be kept well away from any source of ignition, anyone noticing flammable material in the vicinity of electrical equipment should move it to an area with no risk, if the material is waste then it should be deposited in the waste skips/bins provided.

**Maintaining First Aid Boxes**

On a monthly basis the first aid boxes will be inspected by an appoint person or the site manager. All out of date stock must be removed and deposed of in the proper manner (if in doubt ask the site manager). All eye wash stations should be check monthly, any out-of-date bottles of eyewash must be removed, and the station restocked. A check list will be filled in and given to the site manager monthly.

Below is listed the minimum requirements of a first aid box:

* A leaflet giving general guidance on first aid.
* Twenty assorted adhesive dressings.
* Two sterile eye pads with bandage.
* Four individually wrapped triangular bandages.
* Assorted safety pins.
* Six medium sized individually wrapped sterile un-medicated dressings.
* One pair of disposable gloves.
* Individually wrapped sterile cleaning wipes.
* Resuscitation aid.

**Boundary Fence Inspection**

 On a monthly basis all boundary walls, hedges, and fences should be inspected by a competent person, the inspection should also consider any signs in place. The result should be recorded on the ‘Boundary Fence Inspection’ sheet and filed.

**Incidents of Vandalism**

If anyone becomes aware that any form of vandalism has occurred, they should inform the site manager immediately, who will fill in an ‘Incident Report’ form. The site manager will inform the director if appropriate to do so. Any form of vandalism should be investigated, and any recommendations should be actioned as soon as possible to prevent re-occurrence. If an employee witness’s an act of vandalism, under no circumstances should they approach the culprit, they should inform the site manager who will investigate the situation.

**Vegetation Management**

Vegetation around site should be managed in accordance with best practice. All areas should be monitored on a fortnightly basis and any area that requires attention should highlighted to the site manager who will arrange for relevant work to be actioned. It is not an individual’s responsibility to monitor vegetation around the site, therefore the company hope the whole workforce will be active to ensure the quarry and surrounding areas are kept tidy.

Injurious weeds such as Ragwort, Creeping Thistle etc should be controlled by the chosen method, with regard to Ragwort this is done by hand pulling. It is important to pull Ragwort before it seeds to reduce the spread.

**Quarry Energy Save**

All lighting must be switched off when leaving a room and at close of business each day. All office electrical equipment must be switched off at the end of each working day. All other electrical equipment must be switched off when not in use. All screeners or mobile plant that is not being used should be switched off to save fuel.

Any heaters with timers – the timer should be set correctly and used (ensuring the timers are changed when the clocks are changed), do not switch the off at the mains. All other heaters should be used on a low setting during the winter months and switched off when not required.

**Other Site Maintenance**

Maintenance operations at units can be extremely dangerous if they are not carried out properly. The following procedures have been designed to minimise such risks. All maintenance tasks should carry a risk assessment and method statement.

* Abrasive Wheels.
* Maintenance- Electrical.
* Maintenance-Mechanical.
* Battery Charging.
* Welding.
* Welding in Confined Spaces.
* Welding and Burning Work.
* Hot Works for Drums.

**Abrasive Wheel**

When an abrasive wheel is misused, the wheel can shatter. Fragments of broken wheel can cause a fatality. You must,

* Only mount an abrasive wheel if trained and competent to do so and authorised by the site manager.
* Never use a damaged wheel and ensure that correct PPE such as eye protections is worn at all times.
* Ensure the tool rest is as close as possible to the wheel.
* Remember abrasive wheels mounted on portable grinding machines are equally dangerous and all the same precautions must be taken.

**Maintenance – Electrical**

A considerable number of deaths occur each year either directly or indirectly as a result of electrical maintenance and repair work. Any person who works on or with any electrical equipment must be competent to so and will be appointed in writing.

Unless it is unreasonable in all circumstances, no person will work on or near any live conductor. Prior to starting work, the equipment or circuit to be worked on must be isolated and ‘locked off’.

Repairs to broken equipment and cables etc must be carried out in accordance with IEE 16th edition guidelines and the Electricity at Work Regulations (use of Electricity at Quarries) 1989.

When replacing defective parts or units, those being replaced must conform to the appropriate British Standard for which it is intended. In cases where the same type of part cannot be purchased ensure that any similar part is of the same rating as the original.

When installing new equipment ensure that the work is carefully planned, protected, commissioned, and tested. Select suitable equipment such as waterproof switchgears if it is likely to be exposed to water. Always ensure that cable duct covers, and switch covers are replaced and fixed into position.

Never take short cuts by disguising damaged insulation especially on portable equipment. Always replace the damaged cable. Those persons appointed by the site manager to work with electrical equipment and installations should refer to the appropriate Codes of Practice, Regulations and Standards required should there be any doubt.

Under no circumstances will anybody not appointed by the site manager tamper or interfere with any electrical apparatus unless in an emergency situation only to prevent danger.

**Maintenance Work – Mechanical**

Only qualified maintenance employees and qualified contractors can be authorised to carry out mechanical repairs or other work that requires special skills or knowledge. You must:

* Never attempt any maintenance outside your abilities or authorisation.
* Never remove a machine guard, barrier, or fence while the machine is operating or in motion.
* Before maintaining or cleaning machinery or plant, isolate the source of power. Never rely on any airline being drained to immobilise equipment. Always check doors in a safe position.
* Exercise caution when working on plant with in running nips and intermeshing gears. Machine parts can still move even when power is off.
* Tell the site manager if you come across unexpected problems.
* Never leave machine parts, tools, materials etc where they can be a danger to others.
* When you are satisfied that the job is done, replace all guards.
* When maintenance or repairs are complete, get authorised person responsible for the section of plant to restart it, after checking it is safe to do so.
* Immediately report any defect on plant start up signals or emergency stop systems to the site manager.
* At no time rise on conveyors, hoists, or any moving machinery.

**Workshops**

Vehicles are also a hazard in the workshop, before starting work on a vehicle you should :

* Ensure the breaks are applied or the wheels are chocked.
* Ensure raised bodies or cabs are propped using purpose made props or ram choke.
* Support vehicles on both jacks and axle stands. Never rely on hydraulic jacks alone.
* Beware of explosion risk when draining/repairing fuel tanks or when charging batteries. Batteries being charged give off hydrogen, which can be explosive. Exclude all sources of ignition.
* Use a tyre cage when inflating tyres, particularly with split rim wheels, if one is not available stand well clear to the side and ensure no one else is in the area that could be injured.
* Beware of explosion risk when carrying out hot work (cutting or welding) on wheels or axels. Always remove tyres completely from rims.
* Avoid battery short circuits. These can cause burns.

**Battery Charging**

Warning, when a battery is being charged an explosive mixture of oxygen and hydrogen is formed, a short circuit, an open flame or a spark near the battery can cause a powerful explosion. Battery charges should be sited in a well-ventilated area with smoking / naked lights etc prohibited within 10 meters.

Always connect the charger leads before turning on the charger.

Make sure the positive lead is on the positive terminal and negative lead on the negative terminal.

Make sure the battery being charged can breathe i.e. loosen battery plugs.

Turn off the charger as soon as the battery is charged., overcharging may damage the battery.

Always turn off the charging current before disconnecting the charger leads. Ventilate well, particularly if the battery is being charged in a confined space. The battery electrolyte includes corrosive sulphuric acid. Any electrolyte that is spilled on the skin should be removed immediately. Wash with soap and plenty of water. If electrolyte gets in your eyes or any other part of the body, rise off immediately with plenty of water and contact a doctor straight away.

**Welding**

**Welding and Burning work – Compressed Gas Welding**

Gas welding and burning uses heat from a supply of fuel gas (normally propane or acetylene) supplied under pressure to the torch where it is burned with oxygen to produce a hight temperature flame. To reduce the likelihood of injury you must:

* Only carry out welding work if you are trained and authorised by the site manager or you are trained under the close personnel supervision of an authorised person.
* Wear appropriate personal protective equipment. In addition to your safety boots and flameproof overalls this will always include eye protection and gloves.

**Note : Wherever possible screens must be erected around the welding position to protect persons working nearby.**

* Always check the equipment before commencing to ensure it is in a satisfactory condition; in particular the hoses must not be perished and must be undamaged. Always use proprietary hose clamps.
* Always avoid excessive lengths of hose. The large quantities of gas required to purge the hose properly may produce hazardous conditions in a confined or poorly ventilated area.
* Always replace a hose that is unsuitable. As a general guide if more than two slices occur in a five-metre length then the hose should be scrapped.
* Always use proper hose couplers to join lengths of hose. Pipe should not be used as the outer surface is smooth and does not make a secure joint.

**Note: Never use copper pipe of high copper alloys on acetylene hose. This can cause an explosion in the system.**

* Always try to carry gad cylinders on a purpose build trolly.
* Always move cylinders with their valves closed.
* Always purge each hose separately to ensure that no mixed gases are present. **Under no circumstances should purging be carried out in a confined or poorly ventilated space, it must be done before entry.**
* Always ensure that cylinders and the hoses are safely located before cutting or burning begins. **Spare cylinders must not be kept at the welding position but brought from a safe storage location as necessary.**
* Never hang the torch over regulators. If the equipment is accidentally knocked a leak may occur.
* **Never use grease or oil on an oxygen cylinder, never attached a regulator or equipment that is contaminated with grease or oil, this can cause a spontaneous fire.**
* Always work with adequate ventilation. You may need forced ventilation equipment in confined spaces or during work with some metals or coated metals.

**Welding in Confined Spaces**

Never carry out any welding in a confined space without referring to your manager. Nitrous flames can be produced and if breathed over a period, can become dangerous and might even have fatal results. Welding fumes analysis should have been carried out in all major areas of confinement to determine whether LEV is required or adequate. When cutting or welding in confined spaces you must:

* Keep gas cylinders outside of the confined space.
* Check to ensure that hoses are in a good condition and all connections are tight.
* Always have a second person stationed outside of the control gas supply.
* Always pass the lighted torch into the confined space.
* **Ensure adequate ventilation is maintained at all times.** Where this cannot be done by natural draught, suction fans are recommended.
* **In special circumstances am airline or air fed breathing equipment should be used.**
* **Under no circumstances must an oxygen line be used for this purpose.**

**Welding Work- Using Electric Arc Equipment**

Arc welding joins pieces of metal using heat from electric arc. The arc is formed by a large electric current flowing between the work piece and the welding electrode.

There are electrical hazards for the welder. In addition, the intense light can cause painful eye irritation called ‘arc eye’ to both the user and persons working nearby you must:

* Only carry out electrical arc welding if you are trained and authorised by the site manager or you are training under the close personnel supervision of an authorised person.
* Wear appropriate person protective equipment. In addition to your safety boots and flameproof overalls this will always include eye protection, gloves and an apron.
* Wherever possible screens must be erected around the welding position to protect persons working nearby.
* Always visually check the equipment before work commences to ensure it is in a satisfactory condition and that you have ready means of switching off the power supply e.g. an accessible mains switch near the welding transformer. Never allow any equipment to be placed or stored on top of the welding set.
* Always earth the work piece. The earthing conductor must always be conducted to the work piece and a suitable earth terminal by bolted lugs or secure screw clamps.
* Always remove personnel jewellery, in particular rings, bracelets, and metallic watch straps, before starting work.
* Always have some means to make an electrode holder dead so that electrodes can be replaced safely e.g. a plug and socket connector on the welding lead connection to the electrode holder.
* You should not rely on the insulation of your gloves to protect you if you try to change electrodes with the holder live. **Never hold live electrodes under the armpit**.
* Always be careful where you put down the electrode holder if you stop welding for a short time.
* After finishing welding make the holder dead by disconnecting the welding lead, remove the electrode from the holder and switch off the power supply unit.
* Special precautions are required when welding in confined conductive spaces e.g. the inside of a bin or hopper, and you should seek advice from your site manager.
* Always work with adequate ventilation. You may need forced ventilation equipment in confined spaces or during work with some metals or coated metals.

**Welding and Burning Work – Fire Risk**

Welding and burning work above or close to combustible materials is a common cause of fire. In a confined space the flames may trap you. To reduce this risk you must:

* Take all necessary precaution to prevent fires. When working above or close to portable combustible materials there must be moved clear. When working above or close to fixed combustible plant or equipment this must be covered by fireproof blankets or where suitable, at least a 5 cm (2inch) layer of sand. Remember conveyor belts and other man-made materials such as plastic screens are easily ignited and burn with dense acrid smoke in a fire that is hard to extinguish.
* Always have at least one suitable fire extinguisher immediately available for use at the workplace. For work at height extinguishers should be positioned at any lower levels where there is a risk of fire starting.
* Follow the special precautions when carrying out welding or burning work on plant containing bitumen or flammable oils.
* You must always follow the requirements detailed in a Hot Work Procedure.

**Hot Works on Drums**

Several fatalities have occurred when burning gear has been used for cutting and the drum has exploded.

* Drums should be cut using ‘Cold’ methods e.g. air chisels, special drum cutters etc.
* Where burning gear is to be used the drum should be drained and filled with water.
* Care is needed to avoid steam/hot water near the cutting frame.
* On no account shall empty drums be cut without these precautions.

Approved by

Mr M Ketcher

Director

The following rules/ procedures will be enforced by the Site Managers and the Directors.