

Site Address: Heol Crwys

Operation:

Exposure to Noise

209

☒ Check boxes as appropriate

Hazards identified:

- ☒ Damage to hearing
- ☒ Lower exposure action values: daily or weekly exposure of 80 dB; peak sound pressure of 135 dB.
- ☒ Upper exposure action values: daily or weekly exposure of 85 dB; peak sound pressure of 137 dB.
- ☐ Exposure limit values: daily or weekly exposure of 87 dB; peak sound pressure of 140 dB.
- ☐ Other

Persons at risk: ☒ Site personnel ☒ General public ☐ Client personnel ☐ Other

Without controls

Severity			
	1	2	3
	3		x
	2		
1			
Likelihood			

With controls

Severity			
	1	2	3
	3		
	2	x	
1			
Likelihood			

If the risk product **without controls** is high (scoring 6-9), and remains high **with controls** (scoring 6-9), an alternative safer method of work must be put in place.

Controls considered necessary:

- ☒ Consider using a less noisy process/ machinery.
- ☒ Noise shall be reduced to lowest level possible.
- ☒ Provide personnel with hearing protectors if they ask for it and their noise exposure is between the lower and upper exposure action values – see above.
- ☒ Provide personnel with hearing protectors and make sure they use them properly when their noise exposure exceeds the upper exposure action values – see above.
- ☒ Identify hearing protection zones, i.e. areas where the use of hearing protection is compulsory, and mark them with signs if possible.
- ☒ Provide personnel with training and information on how to use and care for the hearing protectors.
- ☒ Ensure that the hearing protectors are properly used and maintained.
- ☒ Make sure the protectors give enough protection – aim at least to get below 85 dB at the ear.
- ☒ Target the use of protectors to the noisy tasks and jobs in a working day.
- ☒ Select protectors which are suitable for the working environment – consider how comfortable and hygienic they are.

209 Exposure to Noise - Controls considered necessary (cont.):

- ☒ Make sure the protectors are compatible when worn with other protective equipment (e.g. hard hats, dust masks and eye protection).
- ☒ Provide a range of protectors so that employees can choose ones which suit them.
- ☒ It is important that employees understand the risks they may be exposed to. Where they are exposed above the lower exposure action values they shall be informed of:
 - the likely noise exposure and the risk to hearing this noise creates;
 - what we are doing to control risks and exposures;
 - where and how people can obtain hearing protection;
 - how to report defects in hearing protection and noise-control equipment;
 - what their duties are under the Noise Regulations 2005;
 - what they should do to minimise the risk, such as the proper way to use hearing protection and other noise-control equipment, how to look after it and store it, and where to use it;
 - our health surveillance systems.
- ☒ Maintenance: To make sure that hearing protection works effectively check that:
 - it remains in good, clean condition;
 - earmuff seals are undamaged;
 - the tension of the headbands is not reduced;
 - there are no unofficial modifications;
 - compressible earplugs are soft, pliable and clean.

Additional controls considered necessary and further information:

- ☒ Machinery, plant manufacturers and suppliers are required to provide information on noise levels.
- ☒ As a rough guide, there are likely to be noise risks that need managing wherever you have to raise your voice or have difficulty being heard clearly by someone about two metres away (this is one of the 'listening checks'). As far as peak noise levels are concerned, the lower exposure action value is likely to be exceeded wherever there are noises due to impacts (such as hammering, drop forging, etc) or explosive sources such as cartridge-operated tools or detonators.
- ☐ A sound level meter, or a dosimeter (personal sound exposure meter) worn by the employee may be used to measure/monitor noise levels accurately.
- ☐ **Providing health surveillance:** Health surveillance (hearing checks) will be provided for all employees who are likely to be regularly exposed above the upper exposure action values, or are at risk for any reason, e.g. they already suffer from hearing loss or are particularly sensitive to damage.
- ☐ Refer to CITB Construction Site Safety

Method statement

☒ Yes ☐ No

Permit to work ☒ Yes ☐ No

COSHH Assessment

☐ Yes ☒ No

PPE

☒ Yes ☐ No

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Operation:	Road works	211
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☒ Check boxes as appropriate

Hazards identified:

- ☒ Road traffic accidents to: vehicles; operatives working on the highway; and users of the public highway.
- ☒ Pedestrian operatives and members of the public being run over by plant or vehicles.
- ☒ Persons exposed to hazardous substances inc. carcinogenic nature of pitch, tar and mineral oils.
- ☒ Contact with underground or overhead services.
- ☐ Falls over objects or into excavations.
- ☐ Fires and resultant burns to persons.
- ☒ Excessive noise and vibration.
- ☒ Hazards from dusts, fumes and smoke.
- ☐ Other

Persons at risk: ☒ Site personnel ☒ General public ☒ Client personnel ☐ Other

Without controls

Severity	3	Yellow	Red	Red x
	2	Green	Yellow	Red
	1	Green	Green	Yellow
		1	2	3
		Likelihood		

With controls

Severity	3	Yellow	Red	Red
	2	Green	Yellow x	Red
	1	Green	Green	Yellow
		1	2	3
		Likelihood		

If the risk product **without controls** is high (scoring 6-9), and remains high **with controls** (scoring 6-9), an alternative safer method of work must be put in place.

Controls considered necessary:

- ☒ Works shall be planned and supervised on site by a person having the prescribed qualification.
- ☒ Road works will be signed and barriers erected in accordance with Chapter 8: Traffic Signs Manual.
- ☒ Work equipment will only be used by competent operatives and maintained in accordance with the manufacturer's instructions.
- ☒ Operatives will wear high-visibility reflective clothing and necessary personal protective equipment.
- ☒ All operatives handling bituminous materials or concrete, and all others working on roadworks sites should at all times wear: Clean yellow or bright orange overalls or other conspicuous protective clothing, conforming to BS EN 471. Reflective jackets with horizontally retro-reflective stripes should be worn at night; Stout heat resisting soled safety boots with steel toecaps; Suitable gloves, able to protect the wearer against heat, oil, tars, bitumens and concrete etc.; Conspicuously coloured safety helmets; Adequate warm clothing in cold weather.
- ☒ The conspicuous nature of clothing is essential to ensure that operatives are easily visible to all vehicle and plant drivers and to passing traffic. In addition, the general covering of normal clothing and exposed parts of the body as advocated is necessary in order to prevent contamination of the skin with cement or the various bituminous products and oils used.

211 Road works - Controls considered necessary (cont.):

- ☒ Only competent and authorised persons shall operated plant and vehicles.
- ☒ All tools used must be kept in good order and operators must be competent in their use. Where necessary, training must be given.
- ☒ A competent Banksman will be appointed to assist vehicles moving in restricted spaces.
- ☒ Plant and vehicles will be fitted with suitable and sufficient: automatic reversing alarms; visibility aids i.e. mirrors, CCTV; and hazard warning lights.
- ☒ Work areas, holes and excavations shall be adequately barriered or fenced to prevent persons or plant falling/running into them.
- ☒ Suitable precautions will be taken to prevent vehicles over-running the edge of excavations i.e. Stop-blocks.
- ☐ A fire plan will be prepared and all mobile plant will be equipped with a suitable fire extinguisher
- ☒ The location of all underground and overhead services will be established. Necessary marking, signing and protection will be carried out in accordance with HSE Guidance Note GS6.
- ☒ Adequate lighting will be provided and properly maintained.
- ☒ Noise and vibration will be reduced to lowest possible level. Further to carrying out a suitable risk assessment, ear protection will be issued and worn as necessary and use enforced.
- ☒ Suitable COSHH assessments will be carried out to control the use of all hazardous substances.
- ☒ Careful assessment and monitoring of any dust, fume or smoke conditions is essential.
- ☒ Dusts can generally be controlled by damping down but it may be necessary to provide forced ventilation

Additional controls considered necessary and further information:

- ☒ **Planning:** The majority of roadworks will be subject to the Construction (Design and Management) Regulations, which requires the preparation of a health and safety plan containing details of identified hazards. Associated safe systems of work and any site rules should be included in the health and safety plan, which the principal contractor must ensure is sufficiently developed before the work is carried out.
- ☒ **Back injuries:** Back injuries can occur in working with bituminous materials and with concrete, especially in lifting, raking and tamping. The use of correct lifting techniques and assuming correct postures will assist in eliminating this most common of all hazards.
- ☒ **Fuels:** The fuels generally used on roadworks sites are diesel oil or gas oil, liquefied petroleum gas and, more rarely, petrol. A "No Smoking" rule must be enforced where appropriate. Any leakage from plant, or spillages, must be quickly remedied. A reasonable quantity of oil-absorbent chemical should be kept at all roadworks sites for use on any spillage, i.e. a Spill Kit.
- ☐ Refer to CITB Construction Site Safety
- ☐ Refer to the Department of Transport Code of Practice: Safety at street works and road works.

Method statement

☒ Yes ☐ No

Permit to work ☒ Yes ☐ No

COSHH Assessment

☒ Yes ☐ No

PPE

☒ Yes ☐ No

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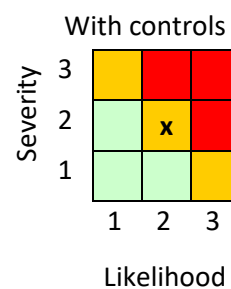
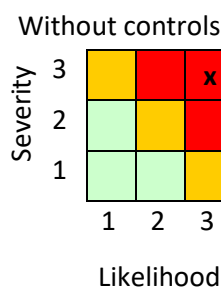
Operation:	Manual handling operations	213
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☒ Check boxes as appropriate

Hazards identified:

- ☒ Musculo-skeletal injury.
- ☒ Cuts and abrasions.
- ☒ Dropping of load causing injury/damage.
- ☒ Other

Persons at risk: ☒ Site personnel ☐ General public ☐ Client personnel ☐ Other



If the risk product **without controls** is high (scoring 6-9), and remains high **with controls** (scoring 6-9), an alternative safer method of work must be put in place.

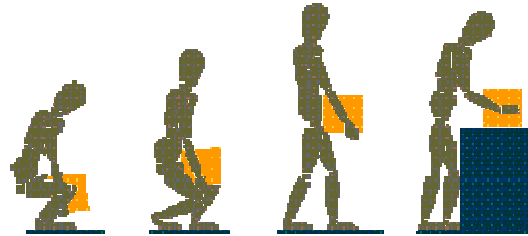
Controls considered necessary:

- ☒ Where load handling operations are essential, consideration should be given to the use of mechanical handling, for example by the use of sack-trucks, lifting equipment, forklifts, etc.
- ☒ Loads shall be positioned mechanically, as close as possible to its final position, to reduce the distance for manual handling.
- ☒ Load to be examined to determine its weight, dimensions and contents.
- ☒ Area of lift and route along which the load is to be transported, shall be well lit, with non-slip surface and clear of any slip/trip/fall hazards.
- ☒ Establish whether the load is hot or cold, or if it has any sharp edges or corners.
- ☒ Test to see if the load is likely to fall apart when lifted, or if the contents within the load may be subject to unexpected movements with sudden displacement of the weight.
- ☒ Operatives will have been trained in the methods of kinetic lifting and handling techniques.
- ☒ Hand-hooks, suckers, or other lifting aids will be employed (specify) where practicable.
- ☒ Consider whether personal protective equipment is required (specify).
- ☒ Team lifting will be carried out under the direction of a competent co-ordinator. Team members will be fully fit and of similar abilities.
- ☒ Temporary resting facilities for the load to be designated / constructed.

213 Manual handling operations - Controls considered necessary (cont.):

- ☒ Good handling techniques are essential in the prevention of injury from manual handling operations. The correct method of lifting is to use the strong leg and thigh muscles and to maintain the natural shape of the spine throughout the lift, as illustrated below:

1. Assess the load - check it is not dirty or has any rough / jagged edges. Also check that the area is clear of debris etc. before moving anything.
2. If you are concerned that the load is too heavy - don't move it - particularly if you have a bad back.
3. Hold the load close to you to reduce the risk of stress to the lower back and to maximise stability. If the load is unevenly distributed hold the heaviest part to your body.
4. When lifting loads from the floor use your leg muscles rather than the back. Stand as close to the load as possible and face it square on. Avoid twisting your body when lifting.
5. Avoid lifting loads when seated.
6. If you are lifting from the floor to a high platform, break the lift into two actions i.e. lifting from the ground to waist level and then waist level to a high platform.
7. Split the load if possible.
8. Whenever you pull or push a load let your leg muscles do the work



Additional controls considered necessary and further information:

- ☒ No person may be required to manually handle a load unless supervisors are satisfied that they are suitably fit, willing and able to do so.
- ☒ Personnel should be trained to recognise loads whose weight, in conjunction with their shape and other features, and the circumstances in which they are handled, might cause injury. In general, unfamiliar loads should be treated with caution and, if undue strain is felt, the task should be reconsidered.
- ☒ Employers are required to provide general indications of the weight and nature of loads and this should be covered in the training.
- ☒ Assessments should be reviewed in the light of experience, when there is a change in manual handling operations, or if a reportable manual handling injury occurs.
- ☒ Refer to CITB Construction Site Safety.
- ☐ Refer to HSE MAC Tool (INDG383).
- ☐ Refer to HSE Construction Information Sheet No 37 – Handling heavy building blocks
- ☐ Refer to HSE Construction Information Sheet No 57 – Handling kerbs: Reducing the risks of musculoskeletal disorders (MSDs)

Method statement

☒ Yes ☐ No

Permit to work

☐ Yes ☒ No

COSHH Assessment

☐ Yes ☒ No

PPE

☒ Yes ☐ No

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Operation:	Excavations: General	214
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☒ Check boxes as appropriate

Hazards identified:

- ☐ Collapse of unsupported excavations.
- ☐ Materials falling onto people working in the excavation.
- ☒ People and vehicles falling into the excavation.
- ☒ People being struck by plant.
- ☒ Undermining nearby structures.
- ☒ Contact with underground services.
- ☒ Access to the excavation.
- ☒ Contaminated ground, fumes and gases
- ☒ Accidents to members of the public. ☐ Other

Persons at risk: ☒ Site personnel ☐ General public ☐ Client personnel ☐ Other

Without controls

Severity	3	Yellow	Red	Red x
	2	Green	Yellow	Red
	1	Green	Green	Yellow
		1	2	3

Likelihood

With controls

Severity	3	Yellow	Red	Red
	2	Green	Yellow x	Red
	1	Green	Green	Yellow
		1	2	3

Likelihood

If the risk product **without controls** is high (scoring 6-9), and remains high **with controls** (scoring 6-9), an alternative safer method of work must be put in place.

Controls considered necessary:

- ☒ Work shall be supervised and carried out by competent people, who will be given clear instruction and information.
- ☒ Check for obvious signs of underground services, e.g. valve covers or patching of the road surface. Use locators to trace any services – mark the ground accordingly. Make sure that the person supervising excavation work has service plans and knows how to use them. Everyone carrying out the work should know about safe digging practices and emergency procedures. Plant and machinery shall not be used to excavate within 500mm of underground services.
- ☒ Unless the excavation can be battered to a safe slope, the sides will need supporting to prevent the possibility of collapse. Operatives shall not go into unsupported excavations, or work ahead of the support.
- ☒ A competent person must supervise the installation, alteration or removal of excavation support – necessary equipment needed such as trench sheets, props, baulks, etc, must be available on site before work starts.
- ☒ The edges of all excavations, where anyone might fall and be injured, must be protected by rigid barriers or, alternatively, excavations must be securely covered - back filled as soon as practicable (refer to Work at Height RA).
- ☒ Barriers, or stop blocks, shall be used to stop cranes, dumpers, lorries, tipping vehicles, etc. from manoeuvring too close to the edge of an excavation and endangering its stability. Timber baulks are effective against small wheeled machines, but taller barriers are needed for larger wheeled equipment and tracked machines. Keep workers separate from moving plant such as excavators. Where this is not possible use safe systems of work to prevent people being struck.

214 Excavations: General - Controls considered necessary (cont.):

- ☒ Non-rigid barriers shall be used in areas where access for persons and transport is not required; these should give an obvious warning by being immediately apparent and brightly coloured.
- ☒ Fence off all excavations in public places to prevent pedestrians and vehicles falling into them. Where children might get onto a site out of hours, take precautions (e.g. backfilling or securely covering excavations) to reduce the chance of them being injured.
- ☒ Materials shall be stock piled a suitable distance clear of the edge of the excavation.
- ☒ Safe means of access to and from excavations must be provided, as must easy means of escape in an emergency.
- ☒ Ladders must be of sound construction, of adequate length and strength, of the correct type and be placed in the supported part of the trench. They must be effectively secured, near the top, to prevent slipping sideways, by lashing, either to adjacent support material or to stakes driven firmly into the ground. They must project sufficiently above the excavation to provide a safe handhold - a distance of 1.05m is recommended (refer to Work at Height RA).
- ☒ Any excavation used as a place of work must be inspected: at the start of each shift before work begins; after any event likely to have affected the strength or stability of the excavation; and after any accidental fall of rock, earth or other material. A written report should be made after most inspections.
- ☒ Head protection shall be worn by all operatives working in the excavation or close to excavations.
- ☒ Precautions will be taken to ensure that excavations do not affect the footings of scaffolds or the foundations of nearby structures. Walls may have very shallow foundations which can be undermined by even small trenches.
- ☒ Excavators and other plant shall be used by competent and authorised operators.
- ☐ Gangways are often needed for access purposes across excavations. Where persons might fall and be injured, such gangways must be fitted with suitable toeboards, and main guardrails, at least 950mm high. An intermediate guardrail, or other rigid barrier, must also be fitted so that there is not an unprotected gap exceeding 470mm in height. Gangways should be at least 430mm wide for personnel access, or 600mm for persons and materials.

Additional controls considered necessary and further information:

- ☐ A detailed survey and method statement will be required to control works in contaminated ground.
- ☒ **Weather:** Work in excavations shall only be carried out when weather conditions do not jeopardise the health and safety of persons involved in the work.
- ☒ **Lighting:** During darkness, edges of excavation should be illuminated, especially where they are adjacent to public thoroughfares. During the winter, or in deep excavations, shafts and tunnels, lighting will be necessary to enable operations to proceed safely. Such lighting must be installed with equipment suitable for use in the excavation.
- ☐ **Ventilation:** Excavations must be kept free from toxic or explosive gases and it must be remembered that any gases which are heavier than air will tend to settle in excavations. The gases involved may be natural, like methane and sulphur dioxide, or they may arise from nearby internal combustion engines (carbon monoxide), leakage from liquefied petroleum gas equipment, or underground storage, or from sewers.
- ☒ **Exhaust fumes:** Do not site petrol or diesel-engined equipment such as generators or compressors in, or near the edge of, an excavation unless fumes can be ducted away or the area can be ventilated.
- ☒ **Means of escape:** All persons working in an excavation should be instructed in escape and rescue procedures should an emergency arise. This is particularly important where unhealthy atmospheres might arise. Instruction should be given on the use of rescue equipment.
- ☒ **Noise:** Occupational and environmental noise is a hazard in excavation, particularly in the case of pile driving. Steps should be taken to ensure that noise from plant is reduced at source as far as possible, that noise levels are assessed and ear protection worn where necessary.
- ☒ Refer to CITB Construction Site Safety, and HSE Guidance No GS 6 and Guidance Booklet HS (G) 47.

Method statement

☒ Yes ☐ No

Permit to work ☒ Yes ☐ No

COSHH Assessment

☐ Yes ☒ No

PPE

☒ Yes ☐ No

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Operation:	Excavations: Buried services	215
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☒ Check boxes as appropriate

Hazards identified:

- ☒ Contact with underground power cables.
- ☒ Rupturing of gas pipes leading to leaks, fire or explosion.
- ☒ Rupturing of water pipes causing flooding and damage.
- ☒ Cutting of underground telecommunications and interrupting services.
- ☒ Rupturing of drains, sewers, culverts etc., and causing health hazards.
- ☐ Other

Persons at risk: ☒ Site personnel ☒ General public ☐ Client personnel ☐ Other

Without controls

Severity	3			
	2			
	1			
		1	2	3

Likelihood

With controls

Severity	3			
	2			
	1			
		1	2	3

Likelihood

If the risk product **without controls** is high (scoring 6-9), and remains high **with controls** (scoring 6-9), an alternative safer method of work must be put in place.

Controls considered necessary:

- ☒ Work shall be supervised and carried out by competent people, who will be given clear instruction and information.
- ☒ Prior to commencement of excavation, all public and local utilities will be requested to provide information of services in the ground of the proposed work area, consult the safety file if applicable.
- ☒ A 'Permit to Dig' system shall be in position to control works.
- ☒ Operatives should look for obvious signs of underground services, e.g. valve covers or patching of the road surface. Use locators to trace any services. Mark the ground accordingly. Make sure that the person supervising excavation work has service plans and knows how to use them. Everyone carrying out the work should know about safe digging practices and emergency procedures.
- ☒ After use of locators, trial holes should be carefully dug, using hand tools, to confirm the position of buried services.
- ☒ The use of hand-held power tools and mechanical excavators too close to underground services shall be barred. Where practicable, such tools should not be used within 500 mm of the indicated line of a cable buried in or below a paved surface.

215 Excavations: Buried services - Controls considered necessary (cont.):

- ☒ Digging should be carried out alongside the service, rather than directly above it; final exposure of the service should be by horizontal digging. Only spades and shovels should normally be used, but the careful use of picks or forks may be necessary to free lumps of stone or to break up hard layers of chalk or sandstone.
- ☒ Any damage to buried services must be reported to the appropriate utility immediately.
- ☒ If an electricity cable is struck everyone should keep clear of the area until the cable owner has made the damaged cable safe. If a cable is struck by an excavator, the driver should stay in the cab. If the driver has to leave the cab, he should jump clear and not climb down, otherwise he may be electrocuted.
- ☒ All exposed cables should be given suitable protection against damage and those more than 1 m long should be supported by slings or props.
- ☒ When excavating near gas mains constant checks should be carried out to ensure that there are no gas leaks. Any damage, however minor, which occurs to the coating of a gas pipe, must be notified to the Gas region. Should an escape of gas be caused or suspected the following action should be taken: **Remove** all personnel from the immediate vicinity of the escape; **Inform** the Gas region by telephone; **Prevent** any approach by the public, prohibit smoking, and extinguish all naked flames or other sources of ignition for at least 5 m from the leakage; **Assist** Gas personnel, police or fire services as requested.
- ☒ Care must be taken near sewers and sewage pipes, since damaging them carries a double risk; toxic or flammable gases may be present in a foul sewer, from which there is also risk of infection from contact with the materials flowing.

Additional controls considered necessary and further information:

- ☒ **Location:** The position of any services in or near the proposed work area should be pinpointed as accurately as possible by means of a locating device, in conjunction with information already obtained. Various locators are available, the main types of locator are:-
Hum device ~ these are receiving instruments which detect the magnetic field radiated by live electricity cables. They function only when current is flowing through the cables and will not detect, for example, street lighting cables during the daytime.
Radio frequency detectors ~ these are also receiving instruments which respond to low frequency radio signals, which may be picked up and re-emitted by cables and long metallic pipes. The results may be confused by other metallic objects which may re-radiate the signal.
Transmitter-receiver instruments ~ a small portable transmitter or signal generator can be connected to a cable or pipe, or placed very close to it so that the signal is induced into it. The receiver can then detect this signal. These locators can provide useful information in difficult situations, but require more skill to operate than other types.
Metal detectors ~ conventional metal detectors can be useful in locating flat metal covers, joint boxes, etc., but may well miss round cables or pipes.
- ☒ For further guidance on buried electricity cables refer to HSE Guidance Note HS (G) 47
- ☐ Refer to CITB Construction Site Safety

Method statement

☒ Yes ☐ No

Permit to work ☒ Yes ☐ No

COSHH Assessment

☐ Yes ☒ No

PPE

☒ Yes ☐ No

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304 Dumpers - Controls considered necessary (cont.):

- ☒ When tipping into any excavations, spoil heaps, pits, etc., suitable measures will be taken to prevent 'over-running' the edge, i.e. stop blocks at a sufficient distance from the edge.
- ☒ No person is to remain seated on the dumper while it is being mechanically loaded, unless it is fitted with a falling object protective structure (FOPS).
- ☒ Dumpers must not be driven across slopes where the angle is greater than that for which it has been designed to operate - drivers shall be instructed to manoeuvre carefully on gradients.
- ☒ Dumpers will be equipped with a roll-over protective structure (ROPS) and seat restraint, which will be used.
- ☒ Compact dumpers must not travel with the skip is elevated.
- ☒ Dumpers will be reversed only when there is adequate rear view visibility or under the directions of a banksman.
- ☒ Dumpers will be equipped with suitable visibility aids i.e. mirror.
- ☒ Dumpers will be equipped with suitable reversing alarm and horn.
- ☒ Dumpers will be equipped with hazard warning lights.
- ☒ Dumpers will not be overloaded.
- ☒ Passengers will not be carried on dumper unless the machine has been so designed.
- ☒ Controls to be clearly marked - drivers must not to operate any controls unless they are sat on the drivers seat.

Additional controls considered necessary and further information:

- ☒ Only use the designed towing points with the required towing pins if the dumper is used to tow trailers, other items of plant or used for recovery towing;
- ☒ Refer to CITB Construction Site Safety
- ☒ Refer to the Site Traffic Management Plan.
- ☒ Refer to the Operator Manual.

Method statement

☒ Yes ☐ No

Permit to work

☐ Yes ☒ No

COSHH Assessment

☐ Yes ☒ No

PPE

☒ Yes ☐ No

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Operation:	Excavators	305
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☒ Check boxes as appropriate

Hazards identified:

- ☒ Machine overturning.
- ☒ Materials or equipment falling from machine.
- ☒ Persons being endangered by machine operations.
- ☒ Contact with obstructions.
- ☒ Arcing or contact with overhead power line or underground services.
- ☐ Other.

Persons at risk: ☒ Site personnel ☒ General public ☐ Client personnel ☐ Other

Without controls

Severity	3	2	1
	1	2	3
	Likelihood		

With controls

Severity	3	2	1
	1	2	3
	Likelihood		

If the risk product **without controls** is high (scoring 6-9), and remains high **with controls** (scoring 6-9), an alternative safer method of work must be put in place.

Controls considered necessary:

- ☒ Operators must be competent, trained and authorised to use the excavator.
- ☒ Copy of certificates of operator competence will be retained with site records.
- ☒ Copy of the excavator manufacturer's operator manual will be kept with the machine.
- ☒ Excavators will not be used unless it has a current certificate of thorough examination.
- ☒ The operator will be responsible for ensuring the machine is not misused, is properly maintained in accordance with manufacturer's instructions and reporting of defects.
- ☒ A competent person (normally the operator) will inspect the excavator according to the manufacturer's instructions; the results of the inspections shall be recorded.
- ☒ The excavators shall only be used as a crane if it complies with the requirements of LOLER 1998.
- ☒ All chains, slings and lifting equipment used for lifting operations must have been thoroughly examined within the preceding 6 months, and subject to a current certificate of examination.
- ☒ Lifting accessories will only be attached to suitably tested anchor points - NOT THE BUCKET TEETH.
- ☒ Excavators will be equipped with FOPS, ROPS and seat restraint.
- ☒ The machine operator will ensure that operations do not endanger any person.

305 Excavators - Controls considered necessary (cont.):

- ☒ Where members of the public may be affected, the area should be clearly cordoned off and clearly signed to prevent access.
- ☒ If it is necessary for anyone to go into the machine's working radius whilst it is working, then the machine operator must be made aware by signals, or other means, such as radio, before doing so. No person should be permitted at any time to be within the machine's working radius without obtaining permission from the operator.
- ☒ It must always be ensured that, when the machine is being operated in confined places, or near other site personnel, there is clearance of at least 600mm for "tail swing"; the danger area must be barricaded if necessary.
- ☒ Mirrors (including convex type) and/or other equipment (i.e. CCTV) must be in place to ensure maximum all round driver visibility (HSE recommends 1 metre).
- ☒ The excavator shall be equipped with an audible reversing alarm and necessary hazard warning lights.
- ☒ No excavator bucket or load should be slewed directly over personnel or vehicle cabins: vehicles should be loaded over the side or rear, and the material should not be dropped from an unnecessary height.
- ☒ Before excavations take place a ground survey will be made to locate any underground services.
- ☒ It is the responsibility of site management to ensure that all personnel on site are familiar with the location of overhead and underground cables. Where overhead power lines are likely to cause danger, the electricity distributor who owns the lines should always be contacted to calculate the safe working distances – these will depend on voltage, maximum sag and lateral swing (also see HSE Guidance Note GS6).

Additional controls considered necessary and further information:

- ☒ When the front shovel is being employed, the backhoe attachment should be in its "travel" position, with the safety locking device in place.
- ☒ The manufacturer's recommended bucket size must not be exceeded. It may be possible to lift the load with the bucket in close to the machine at ground level but, as the load radius and elevation increases, the lifting capacity of the machine decreases.
- ☒ Dangerous overhangs must not be created on a high workface; the wheels or tracks of the machine should be positioned at 90° to the workface to enable quick withdrawal, if necessary. In excavating, the type of soil must be taken into account in determining a safe position for the machine. A workface below the level of a machine must never be undercut so as to affect the stability of the machine.
- ☒ If operating on a gradient cannot be avoided, it must be ensured that the working cycle is slowed down, that the bucket is not extended too far in the downhill direction, and that travel is undertaken with extreme caution.
- ☐ On wheeled excavators, it is essential that the tyres are in good condition and correctly inflated. If stabilising devices are fitted, they should be employed when the machine is excavating.
- ☒ All machine controls shall be clearly marked.
- ☒ Refer to the Site Traffic Management Plan.
- ☒ Refer to the Operator Manual, and CITB Construction Site Safety.

Method statement

☒ Yes ☐ No

Permit to work ☒ Yes ☐ No

CoSHH Assessment

☐ Yes ☐ No

PPE

☒ Yes ☐ No

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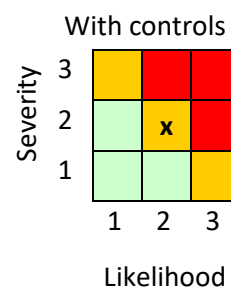
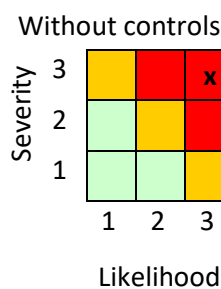
Operation:	Traffic management	312
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☒ Check boxes as appropriate

Hazards identified:

- ☒ Injury to site personnel.
- ☒ Injury to members of the public.
- ☒ Damage to plant, vehicles or property.
- ☒ Contact with overhead power lines.
- ☐ Other.

Persons at risk: ☒ Site personnel ☒ General public ☒ Client personnel ☐ Other



If the risk product **without controls** is high (scoring 6-9), and remains high **with controls** (scoring 6-9), an alternative safer method of work must be put in place.

Controls considered necessary:

- ☒ Every construction site shall be organised in such a way that, so far as is reasonably practicable, pedestrians and vehicles can move safely and without risks to health.
- ☒ Arrange separation of pedestrian traffic and construction vehicle traffic at or before the site entrance.
- ☒ Entrance to the site must be clearly visible to drivers on approach.
- ☒ Delivery vehicles must stop at designated point and report to site office for further directions.
- ☒ Site workers shall park at designated locations, clearly signed and referred to in site induction procedures.
- ☒ Layout site to avoid reversing manoeuvres, where possible introduce one-way systems, including storage areas, where deliveries are made one way in and another way out to eliminate the need for vehicles to reverse.
- ☒ Large vehicles shall have the assistance of a banksman to aid where space is restricted or visibility limited, particularly when reversing.

312 Traffic management - Controls considered necessary (cont.):

- ☒ Traffic routes across site shall be free of obstruction, overhead power lines, unfenced excavations and steep gradients. They shall be clearly signed, indicating routes, hazards and warnings, speed limits, etc, including road markings where possible.
- ☒ Traffic routes across site shall be of sufficient size/width to accommodate the largest required construction vehicle and peak construction vehicle traffic.
- ☒ Where necessary, have speed control measures incorporated, which are suitable for the construction vehicles in use.
- ☒ Traffic routes shall be firm enough to ensure the safe movement and operation of any construction vehicle likely to use the route. Effective drainage on the routes should also be ensured to reduce the likelihood of 'firm' routes turning soft or boggy.
- ☒ Pedestrians shall be segregated from plant and vehicle movement by a fence and/or a kerb or other suitable means.
- ☒ Pedestrians, including drivers exiting from vehicles, to wear high visibility clothing.
- ☒ Provide safe pedestrian routes to and from work locations.
- ☒ Plant operators shall have maximum all round visibility with clear windows and rear view mirrors or/and CCTV. Reverse warning instruments must be effective and maintained.
- ☒ Ensure proper maintenance of mobile plant i.e. brakes, steering, tyres, mirrors, ROPS, FOPS, etc
- ☒ Hazards placed temporarily on approved traffic routes, i.e. ladders, scaffolding, mobile towers etc; to be barriered off to prevent contact with passing traffic.
- ☒ Ensure good lighting at all points of access, particularly in poor weather.

Additional controls considered necessary and further information:

- ☒ During site planning the presence of overhead electric lines must be taken into account since no part of vehicles, plant and equipment must be allowed to be in a position within 15 m of overhead lines from steel towers, or 9 m in the case of wooden poles. This also applies to overhead catenary systems supplying power for trams/railways in which case the utility operator/owner or infrastructure operator needs to be consulted. Refer to HSE Guidance Notes: GS 6 '*Avoidance of danger from overhead electric lines*'.
- ☒ All pedestrian site personnel should be instructed to keep to the pedestrian routes provided. This information can be provided within the health and safety induction for all site personnel.
Where pedestrian and construction vehicle movements are concentrated (perhaps at a pedestrian route leading from welfare facilities, across a site road, to the work areas), suitable means of controlling the risks should be adopted. These might include:
 1. pedestrian crossings;
 2. increased visibility and number of warning/instruction signs;
 3. increased lighting; and
 4. reduced speed limits for construction vehicles.
- ☒ This assessment to be kept with the site Health and Safety Plan and reviewed regularly.
- ☒ Refer to HSE guidance HSG144 – The safe use of vehicles on construction sites.
- ☒ Refer to the Traffic Plan.
- ☐ Refer to CITB Construction Site Safety.

Method statement

☒ Yes ☐ No

Permit to work ☐ Yes ☒ No

COSHH Assessment

☐ Yes ☐ No

PPE

☒ Yes ☐ No

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401 Abrasive wheels - Controls considered necessary (cont.):

- ☒ Abrasive wheel machines will only be used from stable position on secure and safe platforms.
- ☒ Abrasive wheel machines will not be used from a ladder (Refer to work at height risk assessment).
- ☒ A tool producing high levels of vibration shall have anti-vibration handles to reduce the risks hand/arm vibration syndrome (HAVS).
- ☒ To avoid HAVS, minimise the time individuals use the equipment i.e. job rotation – vibration levels must be known prior to use.
- ☒ A separate COSHH assessment will be carried out where dust is likely to be a hazard to health, and suitable personal protective equipment (PPE) will be provided and worn.
- ☒ The area in which machine is to be used will be clear and free of obstructions and flammable materials.

Additional controls considered necessary and further information:

- ☒ See risk assessment number 406 for further controls to prevent hand/arm vibration syndrome.
- ☒ Refer to CITB Construction Site Safety
- ☒ Refer to HSE guidance HS(G) 17 – Safety in the use of abrasive wheels.
- ☒ Refer to the Operator Manual.

Method statement

☒ Yes ☐ No

Permit to work ☐ Yes ☐ No

COSHH Assessment

☐ Yes ☐ No

PPE

☒ Yes ☐ No

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Operation:	Stone-working machinery - General	407
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☒ Check boxes as appropriate

Hazards identified:

- ☒ Exposure to dangerous moving machinery.
- ☒ Ejection and disintegration of materials.
- ☒ Storage and handling of materials.
- ☒ Hearing damage from excessive noise.
- ☒ Health hazards arising from exposure to dust, materials and substances.
- ☒ Insufficient training, instruction and information provided
- ☒ Hand/arm vibration syndrome (HAVS) –
- ☐ Other

Persons at risk: ☒ Site personnel ☒ General public ☐ Client personnel ☐ Other

Without controls

Severity	3	Yellow	Red	Red x
	2	Light Green	Yellow	Red
	1	Light Green	Light Green	Yellow
		1	2	3
		Likelihood		

With controls

Severity	3	Yellow	Red	Red
	2	Light Green	Yellow x	Red
	1	Light Green	Light Green	Yellow
		1	2	3
		Likelihood		

If the risk product **without controls** is high (scoring 6-9), and remains high **with controls** (scoring 6-9), an alternative safer method of work must be put in place.

Controls considered necessary:

- ☒ No person shall be employed to use a stone-working machine unless trained and instructed in its operation, authorised (in writing) and is deemed competent, or is undergoing training/assessment whilst adequately supervised by a competent person.
- ☒ No person under 18 years shall be allowed to operate high-risk stone-working machinery unless adequately supervised.
- ☒ The selected stone-working machine is appropriate and most suitable for the task(s) to be carried out.
- ☒ All guards and other protection devices shall be in position and properly adjusted to be effective during any operation of the machine to prevent access to dangerous parts and danger to themselves and others.
- ☒ Suitable tools shall be selected within the range specified by the machine manufacturer and any subsequent amendment instruction.
- ☒ The Safe Working Speed of the stone-working machine and associated tools shall not be exceeded and shall be clearly shown or otherwise readily available. Multi-speed machines shall be started at their slowest speed.

407 Stone-working machinery - General - Controls considered necessary (cont.):

- ☒ Machines shall be switched off when not in use and shall not be left unattended whilst operating or during run down. When required or appropriate, braking devices shall be fitted. It is also recommended that any braking device should operate in priority to other controls.
- ☒ Start and Stop controls and isolation controls for the machine shall be clearly identifiable and not obstructed. The Start and Stop controls shall be readily accessible and within easy reach of the operator. Isolation controls shall be positioned close to the machine with a means of securing.
- ☒ Persons using machinery must report all defects immediately to a supervisor and not use until repairs have been affected.
- ☒ Appropriate warning notice shall be displayed on any stone-working machine that is out of order, for whatever reason, and is to be kept isolated from its power source unless there is a need during maintenance. A 'Permit to Work' shall be considered for any significant maintenance requirement.
- ☒ All machines, tools, associated holders, clamps, accessories and all means of protection shall be properly maintained in accordance with instructions and by person(s) competent to do so and be kept in good repair and working order.
- ☒ Clear maintenance arrangements for hired stone-working machinery to avoid neglect arising from any misunderstanding between the hire-company and the hirer.
- ☒ A system of Maintenance Management that is designed to meet and suit the needs of particular machines and intensity of use.
- ☒ Use of a Maintenance Log for high-risk stone-working machinery.
- ☒ Workstations shall be kept clean and tidy. Space around machinery shall be clear and free from obstructions, trailing leads and cables. Floors must be level and also kept clean and properly maintained to prevent slips, trips and falls
- ☒ Adequate heating, ventilation and lighting to be provided. The lighting conditions shall avoid causing glare and not produce a stroboscopic effect on moving tools and machinery.
- ☒ Reduce noise or exposure to noise as far as is reasonably practicable e.g. enclosure, noise dampening devices and special tooling. If noise levels continue to reach 'Action Levels' use mechanical reduction measures, set up 'Ear Protection Zones', provide suitable and adequate hearing protection to those at risk and ensure this personal protective equipment (PPE) is worn.
- ☒ Eye protection shall be worn where there is a risk of injury.
- ☒ Sufficient and relevant Health and Safety training, information and instruction shall be provided to all persons involved with the use of stone-working machinery and shall include authorised machine operators, assistants, designated maintenance personnel, supervisors and managers having responsibility for the workshop. A training record shall be kept and reviewed from time to time to ensure correct levels of awareness are maintained amongst the workforce.

Additional controls considered necessary and further information:

- ☒ Refer to CITB Construction Site Safety

Method statement

☒ Yes ☐ No

Permit to work ☐ Yes ☒ No

COSHH Assessment

☐ Yes ☐ No

PPE

☒ Yes ☐ No

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601 Unauthorised visitors to site - Controls considered necessary (cont.):

- ☒ Materials will be stacked in such a manner that they cannot be dislodged or easily moved.
- ☒ Sand and spoil heaps must be kept to lowest reasonable levels and battered to safe angle of repose.
- ☒ Hazardous substances will be stored in a secure manner i.e. in locked containers.
- ☒ Gas cylinders will be kept in secure enclosures.
- ☒ Electricity supplies will be isolated in locked buildings or compounds and 'locked off' in absence of workforce.
- ☒ Access to incomplete building, where there is danger, will be prevented.
- ☒ Access to scaffolds or elevated places (including tower-cranes) will be prevented, so far as practicable, by securely boarding or removing and chaining access ladders after work ceases.
- ☒ Effectiveness of measures will be monitored and advice of the Safety Advisor sought when problems are found.
- ☒ Where there is evidence of trespass the local Police should be informed.

Additional controls considered necessary and further information:

- ☒ Refer to CITB Construction Site Safety.
- ☒ Refer to HS (G) 151 – Protecting the public, your next move.

Method statement

☒ Yes ☐ No

Permit to work

☐ Yes ☒ No

COSHH Assessment

☐ Yes ☐ No

PPE

☒ Yes ☐ No

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Operation:	Dry sweeping of dust	

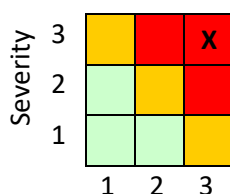
☒ Check boxes as appropriate

Hazards identified:

- ☒ Exposure and inhalation of silic dust
- ☒ Exposure and inhalation wood dust
- ☒ Exposure and inhalation low toxicity dust (eg gypsum)
- ☒ Skin and eye irritation

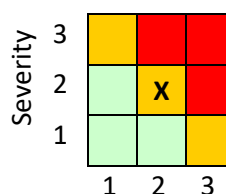
Persons at risk: ☒ Site personnel ☒ General public ☒ Client personnel ☐ Other

Without controls



Likelihood

With controls



Likelihood

If the risk product **without controls** is high (scoring 6-9), and remains high **with controls** (scoring 6-9), an alternative safer method of work must be put in place.

Controls considered necessary:

- ☒ Correct PPE is to be worn at all times. – FFP3 masks are to be worn when sweeping.
- ☒ If suitable, damp down the area prior to sweeping, to help prevent the dust becoming air bourn.
- ☒ Corner off the area - to prevent other workers from coming in to contact with potential air bourn dust.
- ☒ Ensure the area is well ventilated.
- ☒ Ensure sweeping is only carried out in short periods at a time, regular breaks from the area will allow the dust to settle, before sweeping begins again.
- ☒ Pick out large debris before sweeping.
- ☒ Use the correct brush – a soft bristle brush will be best to push the debris in to piles.
- ☒ Always wash your hands before eating and at the end of the task.
- ☒ Refer to HSE information sheet – construction dust
- ☒ Refer to HSE CN5 – Small scale clearing of rubble, dust and debris

Method statement

☒ Yes ☐ No

Permit to work

☐ Yes ☐ No

COSHH Assessment

☒ Yes ☐ No

PPE

☒ Yes ☐ No

Completed by: Lee Bamford

Date: 23/04/24

