Health & Safety

Good Health and Safety is a habit, not a request.


Visual guide to project standards for Managers and Supervisors

**Revision No.1** - Feb 2013

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**Important note:**

The following Visual Standards have been adapted, with thanks and acknowledgment, from an example of a respected company-specific guide to Visual Standards.

The sole aim of this adapted version is to illustrate and communicate examples of good site practice to a wider industry audience, via CONIAC.

As such, any rules, instructions or other content in this guide was intended solely for those working for the company who originally produced this guide.

It should thus not be regarded as applicable to anyone in the wider industry, other than a general indication of this specific company's approach to ensuring good site management.

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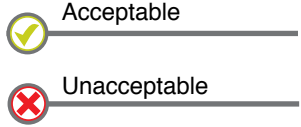
The cross and tick will be used throughout this booklet to show you what is correct/ acceptable and what is incorrect/ unacceptable.

At the back of each numbered section is a Notes area for your use.



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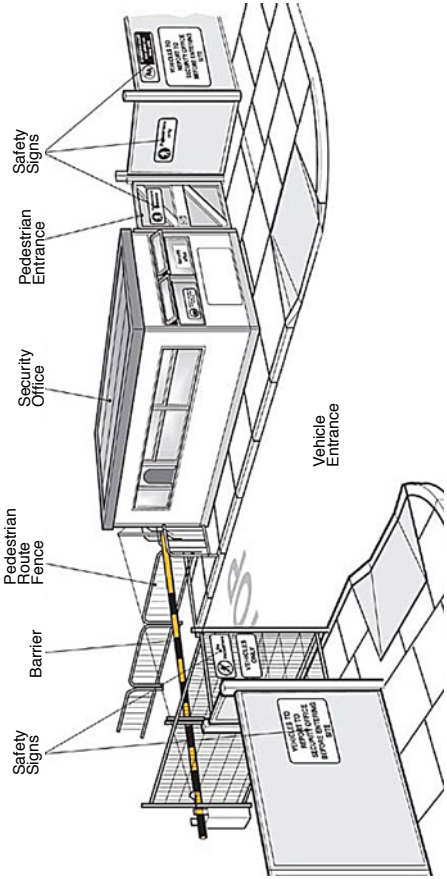
## Project Entrance

First Impressions.
Ensure the entrance reflects a clean, tidy and professional standard at all times.

- Speed limit signage displayed.
- Security signage displayed.
- 'Warning Construction Site' signage for any approaching traffic is in place.
- Adequate protection for the public passing the site including regular road sweeping.
- Separate pedestrian access to and from the main entrance.




The illustration shows the general arrangements for establishing the main entrance





- Turnstile unit or full time guard at entrance to ensure signing in and out.
- Ensure the main SHE signboard is displayed by the turnstile including project contacts Information displayed in clip frames.
- No materials to be left or stored by project entrance. Establish a holding point if necessary.
- Maintain signage and appearance throughout the duration of the project.


- First impressions on entry. The entrance must send a clear message on our SHE standards including induction requirements.

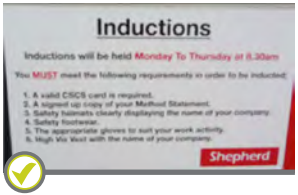
- No rubbish or equipment such as PPE left around the project entrance.





- Ensure visitor SHE information is displayed and a signing in procedure is in place.
- Ensure adequate lighting is provided.
- Ensure PPE free routes are established from the entrance to the welfare area and these are clearly indicated.






- Smaller projects (such as those in existing buildings) must have a signing in point and some form of access control.

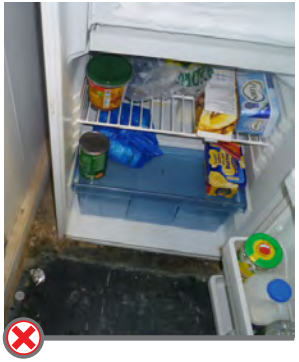

- Current SHE hazard information for the project is displayed at the site entrance to be utilised for visitors briefing – such as Risk of the Day.



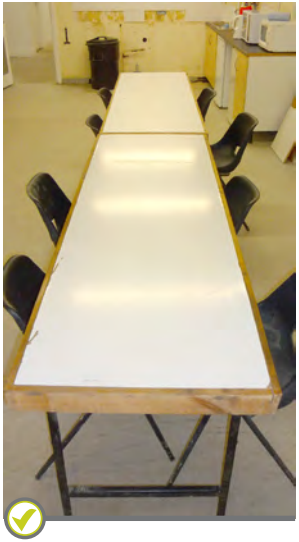


## Welfare Facilities

- Establish adequate welfare facilities relative to the potential size of the workforce.
- Ensure drinking water (marked as such) and cups provided.
- Provide means to heat/ prepare food and boil water.
- Ensure clean and adequate fridges.
- Provide seats with backs and tables.



- Ensure ambient lighting and temperature.
- Keep clean and tidy.
- Provide adequate toilets relative to workforce on site (refer to Welfare Minimum Standard).
- Ensure warm water, soap and means of drying hands are available.
- Provide showers if required.
- No graffiti.
- Ensure facilities are clean and maintained to a high standard. These should reflect our standards!



Poor Standards/
Damaged Equipment





## Offices and Meeting Rooms

Ensure good order in offices and meeting rooms to reflect a professional organised project.

- Is the project SHE noticeboard displayed and correctly maintained?
- Are electrical and fire installations certified and maintained?
- Are desks and workspaces organised and clean and tidy?
- Are computer workstations correct with proper seating etc. (Refer to VDU section)?

- Is there ambient lighting and heating.
- Are trailing cables kept tidy and managed.
- Is there a cleaning regime in place for facilities.
- Is there sufficient storage cabinets for equipment, stationery etc.

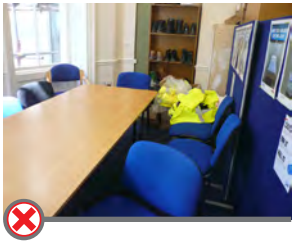
- Ensure no material deliveries stored in offices.
- Ensure Fire Exits kept clear.
- Ensure no materials to be stored or rubbish allowed to accumulate.

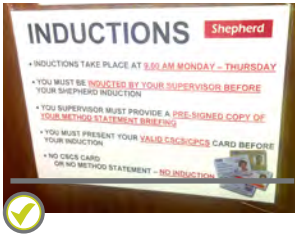




## Induction Room

- This must be a designated induction room to seat at least 8-10 people comfortably.
- Canteens/stores should not be used.
- This room must be a clean, tidy organised space. First impressions…it must look professional!
- It must have seating for all who attend.
- Ambient conditions.
- Minimal external distractions, i.e. noise or people constantly entering the room.
- A DVD with a screen large enough for everyone to comfortably view it.



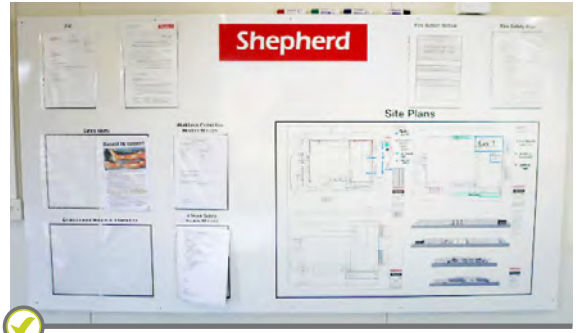


- An overall site plan showing site layouts, access routes for vehicles and pedestrians and escape routes.
- Samples of required PPE to demonstrate standards
- Information on key project hazards and controls in place.
- Only relevant posters and SHE information arranged in a coherent way.
- A spare fire alarm call point available to demonstrate the sound of the alarm.
- Photographs of project team, identifying their key roles.





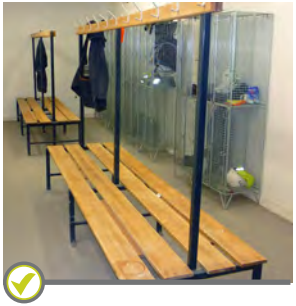





- Standard induction boards will soon be available for use by all projects.

## Drying Rooms

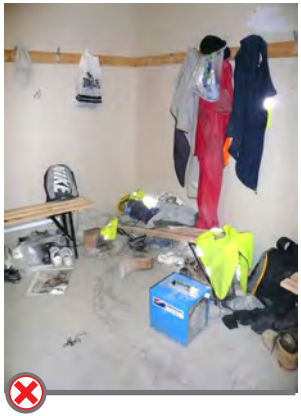
- There must be adequate space provided for the size of the workforce. Along with;
- Lockers provided for storage of non-work clothes and valuables. (Padlocks do not need to be supplied).
- Hanging space for work clothes to allow them to dry.
- Thermostatically controlled heating that is covered with grilles and is sufficient to dry wet work clothes.
- Adequate lighting and ventilation.

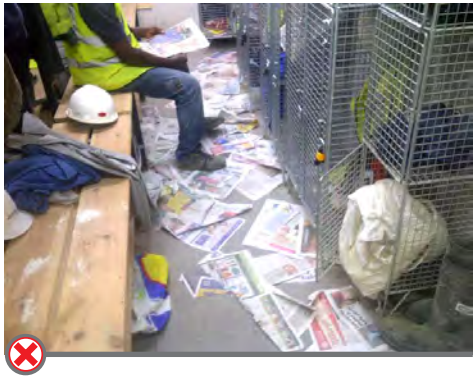






- Kept clean and tidy and well maintained.
- No rubbish or old work clothes allowed to accumulate.
- Periodic removal of unwanted or unused clothing and footwear.
- Adequate fire detection system in line with project fire risk assessment.





## SHE Signage and Information

SHE Signage and Information Boards reflect a professional, high quality image of the company. Ensure the following

- Project SHE Notice Board(s) in place in main offices ( and other key areas as required) and maintained.
- Project SHE Information Board(s) in place in welfare areas and maintained.







- 'You Said We Did' Board(s) displayed in prominent position and updated with Near Hit actions and Workforce Consultation meeting actions.
- All required information displayed on SHE notice/ information boards is available for workforce to read/ review.
- Signage is not used to control a hazard that can otherwise be eliminated.
- Signage is displayed in a professional manner, is professionally made and printed on Correx with logo.
- Any site-specific signage must be displayed on Correx backing if printed at site.
- The information conveyed by signage is considered properly to reduce negative/poorly communicated messages.


- ‘Less is more’. Signage is only used where other safety measures cannot reduce a hazard or risk
- No faded or torn signage.
- Signage relevant to the stage of the project
- Prohibition/mandatory and warning signs only used as necessary








## NOTES...

## NOTES...





## Access Routes and Walkways

- Must be clearly signed, indicating routes, hazards and warnings.
- Ensure routes are of a sufficient size/width to accommodate peak site pedestrian traffic during an emergency evacuation.
- Keep routes as direct as possible to the work areas.
- Ensure routes are separated from construction vehicle routes by rigid barriers or fencing.
- Remember all pedestrian routes must be denoted by blue arrows/ netlon fencing etc.

- Ensure routes set out to provide early visibility of oncoming construction vehicles.
- Keep routes separated from reversing areas, loading bays and high risk construction operations.
- Routes must be maintained in good condition; clear of obstacles, debris, litter, mud, snow and ice etc.






- Where pedestrian and construction vehicle movements are concentrated (perhaps at a pedestrian route leading from welfare facilities), suitable means of controlling the risks should be in place These should include:
  - Pedestrian crossings.
  - Increased visibility and number of warning/instruction signs.
  - Increased lighting.
  - Reduced speed limits for construction vehicles.
- Where it is not possible to segregate pedestrians and construction vehicles, safe systems of work, such as trained traffic marshals should be in place.

## Crossing Points

- Access to crossing points must be defined by red crowd barriers at either side unless other demarcation (such as chain link fence) is in place.
- All crossing points must be clearly signed for both drivers and pedestrians.

- Crossing points should allow easy access to work areas from main access routes.
- Crossing points must be well constructed, free draining, and kept free from obstructions and trip hazards.
- Crossing points must provide pedestrians with a clear view of traffic movements.





- At points where large numbers of pedestrians cross busy vehicle routes, eg near site welfare facilities, additional traffic control measures must be implemented, such as traffic control systems, or traffic marshals, or vehicle movements may need to be restricted to specified times.

- Where people with disabilities may use site pedestrian routes, eg on occupied sites, ensure their safety by providing ramps for people in wheelchairs and tapping boards for the visually impaired.

## Vehicle/Traffic Routes

- Must be clearly signed, indicating routes, hazards and warnings, speed limits, and including road markings where possible. They should also be of sufficient size/ width to accommodate the largest required construction vehicle and peak construction vehicle traffic movements.





### Routes must be:

- Planned and designed to ensure a one-way flow of traffic.
- Set out to reduce the need for reversing manoeuvres.
- Kept a sufficient distance away from any excavations.
- Set at a suitable gradient for the construction vehicles to operate safely.

- Constructed with speed control measures such as speed ramps incorporated as necessary which are suitable for the construction vehicles in use.


## Routes must also be:

- Suitably constructed to ensure the safe movement and operation of any construction vehicle likely to use the route.
- Maintained in good condition, of an even surface and free of hazards. Where hazards cannot be removed from the vehicle route, they should be signed, barriered and, if necessary, lighting provided.

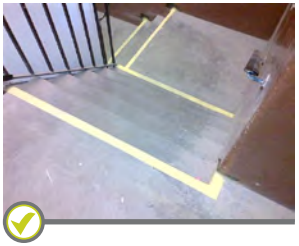




- Separated, where it is reasonably practicable, from ‘muck-shift’ roads where muck-shift construction vehicles may destroy the vehicle route surface.

open excavation next to roadway

## Stairs and Ramps



All stair surfaces must provide adequate grip for users.

- Ensure sufficient lighting to see step edges clearly with emergency back up.
- Highlight edge of top and bottom step with a high visibility finish.
- Stairs/ Ramps must be kept clear of materials and debris and any spillages cleaned up.





- Stairs and steps must be maintain and checked regularly.
- Ensure double guardrails on the inner side of access stairs.
- Provide handrails on each side if flight of stairs is wider than 2m.
- Ensure half landings are screeded as soon as stairs are installed, alternatively, infill gap with ply to remove trip hazard.

- Self-adjusting stairs should be utilised where possible in preference to ladders.

- Stairs must be provided as primary means of access for scaffolding. Use ladders only as a last resort.

## Ramps

- Ramps must be suitably constructed (with TW design if required) and suitable for moving materials. The steepness of the slope must be considered and factored in.





- Ramps must be clearly visible with sprayed edges or signage as required.
- Ensure adequate edge protection provided if there is a fall risk.
- Ensure adequate grip underfoot – brush finish to concrete or anti-slip finish on vehicle ramps.

## Lighting

- All temporary lighting schemes must be planned and designed by temporary electrics supplier.
- Ensure lighting arrangements are reviewed as the project progresses including seasonal changes.
- Light thrown upwards causes glare. Luminaires should always be above working level at each stage of the job and as a general rule be mounted as high as possible.
- Area lighting should produce an overall level of illumination sufficient for men and vehicles to move about in safety
- Large open areas should receive light from at least two directions to avoid dangerous, dense shadows.
- Consider utilising portable light towers to provide light to all areas.



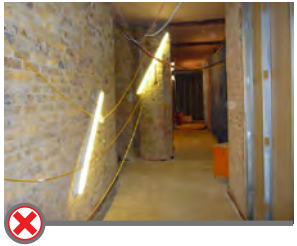


- Safety lighting should include stairs, corridors, scaffold access routes and the illumination of walkways and access routes.
- A 110V supply must be used on scaffolding and other temporary structures where fittings and cables are prone to damage.
- A 230V supply in SWA (steel wired armour) is only used where luminaires and cables are properly fixed and well protected e.g. high level floodlights. All light mountings should be as high as possible to avoid glare. The spacing should be such that the light is evenly spread.

- Lights must be fixed so that the supply cable is not required to bear any weight. Festoon lighting is not permitted.

- All lamps must be in waterproof lampholders and protected by guards or shades with all cabling suspended above.

- Task lighting at the work point must be provided by Sub-contractors.
- Luminaires must be placed so that no-one is required to work in their own shadow and that the local light for one person is not a source of glare for another.
- Lighting can only be moved by qualified electricians with permission from SCL.



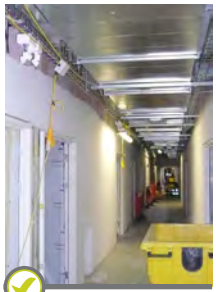




## Cable Management

- Ensure the Temporary Electric Scheme allows sufficient transformer positions for work areas and transformers are not placed near to emergency exit points etc.
- Promote the use of cordless tools with sub-contractors and provide battery banks in easy to access areas.
- Provide overhead power connections along corridors etc. Where possible, provide 1 power point per room along a corridor.


- Sub-contractors must use splitters to maximise power connections.
- Sub-contractors must route cables overhead and use S hooks or similar suspension methods to avoid trip hazards.
- As a minimum route cables along walls and away from walking routes if overhead suspension is not possible.
- Sub-contractors must check all leads daily before use and record a weekly check to ensure they are in good condition and must remove damaged leads immediately.
- Sub contractor must carry out PAT tests every 3 months with leads visibly marked as tested.








## Material Storage and Stacking

- Designated contractor storage areas must be agreed for plant, materials, waste, flammable substances etc.


- Do not allow storage areas to ‘spread’ on to footpaths and other walkways.
- Do not store materials where they obstruct access routes or where they could interfere with emergency escape routes.
- All storage areas must be tidy, whether in the main compound or on the site itself.
- Measures must be in place to prevent accidental and/or weather damage to materials.
- No palletised material such as plasterboard or bricks etc. to be stacked more than 2 packs high.

- Flammable materials must be stored away from other materials and protected from accidental ignition.
- The use of cardboard packing on sites must be minimised where possible.

- Do not store materials on top of containers.

- Fragile material (such as glass on stillages) must be fully banded/protected at all times until the point of installation.





- Deliveries must be planned to keep the amount of materials on site to a minimum.
- Stillages must be maintained in good condition for stacking purposes.
- Sheet material must not be stacked vertically where it could topple or be knocked over.

## NOTES...





## NOTES...

## Temporary Electrics Scheme

- All temporary electrics schemes must be designed and installed by a competent electrical contractor with layout drawings available.
- All installations must be certified to BS7671 and re-tested every 3 months with copies of certificates held on site.
- All cable rated above 110V located in areas where it is prone to damage must be sheathed in steel wired armour (SWA) cable.
- MDU's must be locked at all times to prevent unauthorised access
- MDU's must be visibly marked with live electric signage.








- All cables and glands must be maintained and protected.
- The position and routing of electrical cables must be planned to ensure they are not routed along the floor or across vehicle routes.
- All cables must be visibly marked as live with signage or marker tape.
- Ensure that an electricity meter is installed to monitor project energy usage.

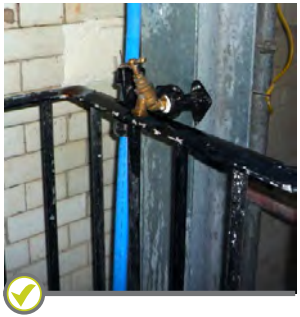
## Water

- Mains water supplies to sites must be tested and chlorinated as part of the establishment of welfare facilities.
- A water meter is required to monitor project usage
- Ensure temporary water pipes are adequately insulated to prevent pipes freezing and are corrosion. resistant if being used on contaminated ground
- There must be a supply of drinking water which can be from bottles or tanks until a mains supply is available.
- Bib taps must be established in fixed positions e.g. through risers and positioned where they are easily accessible and cannot be damaged.





- Hydrants must be clearly marked on site plans.
- It must be possible to isolate the water supply outside the building or on the ground floor so the supply can be turned off at the end of each working day.
- Ensure all fittings are maintained to prevent any persistent leakage of water.
- Water must be cleared from open floors and walkways to prevent slips, trip or falls.
- Ensure any activities requiring the use of electricity and water, i.e. jet washing, have adequately insulated and protected supplies.



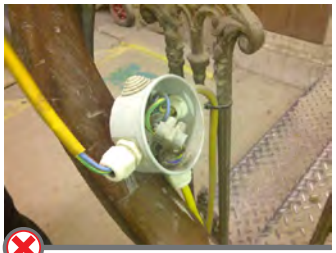
## Transformers and Power

There must be an adequate supply of transformers in each work area to reduce trailing leads and power drop off.

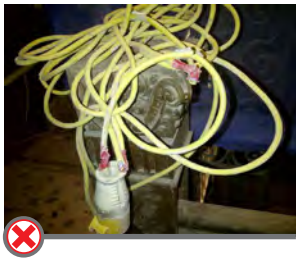
- Transformers points must be positioned away from exit routes and walkways.
- Junction boxes, adaptable boxes and plug in points must be maintained and installed correctly.
- All electrical supplies must be protected from water ingress.
- RCD devices must be regularly checked on electrical equipment.
- Use of any equipment over 110V requires additional Risk Assessment and agreement with SCL.








- Power cables, leads and chargers must have visual checks carried out daily by users and recorded inspections should be carried out by competent persons every week, to ensure;
  - There are no bare wires visible.
  - The cable covering is not damaged.
  - Plugs are not damaged.
  - There are no taped or other non-standard joints in the cable.
  - There is no bare cable showing where it enters the plug or equipment.
  - The outer casing of the equipment is not damaged or loose.
  - There are no signs of overheating on the plug, cable or equipment.








  - No Residual Current Devices (RCDs) are defective (the test button should be pressed daily).
  - Battery banks or charging stations are provided.
- Extension leads are not overloaded.

## NOTES...





## NOTES...

# Emergency Exit Routes and Lighting


- Escape routes must be established from all areas of the site, regardless of the stage of construction.
- A minimum of 2 fire exit signs should be visible at all times. These can be either sprayed onto the walls/ floors using a template (available from M4 signs) or by using the green fire exit signs to indicate routes of travel.


- Emergency lighting is required in all escape routes to aid escape (including stairwells).
- Emergency lighting should be checked, visually and tested weekly as part of the SCL weekly fire inspection regime.





- Fire exit routes must be kept clear from obstructions and must lead to a place of safety
- Fire exit doors must not be wedged open.

- All fire exit doors from accommodation or within the building under construction must open outwards, with push bars, these must not be locked.

## Fire Points

- All Fire Points must have a base unit capable of holding 2 fire extinguishers, foam, powder, water or $CO^2$.
- All Fire Points must ensure the fire extinguishers are positioned 500mm above the ground.
- All Fire Points must have a 'backing board' to hold/fix the means of raising the alarm (e.g. klaxons / manually operated sounders or an interconnected alarm etc.) and a copy of the site layout drawing indicated emergency exit routes.






- The site layout drawing must identify 'Fire Points' / Escape Routes and Muster Points as a minimum and be marked with the last revision date and location of the Fire Point in relation to the escape route.
- Fire Points must be easily accessible, and not blocked with materials
- The extinguishers must be kept clean and readily identifiable as a potential lifesaving piece of equipment.
- Fire Points must be visually checked weekly as part of the SCL weekly fire inspection and any defects rectified immediately.


# Fire Alarms

The appropriate means of raising an alarm must be provided for all areas of the site and the stage of the project. e.g.

## Open Site (Minimal Construction)

- Air horns or stand alone fire alarms.

## Partially enclosed building or site

- Wireless or hard wired linked alarm system to a central call point





## Fully Enclosed Site (Including refurbishment)

- Hard wired/linked system linked to a central panel in Project office or security cabin

## Fire Alarms

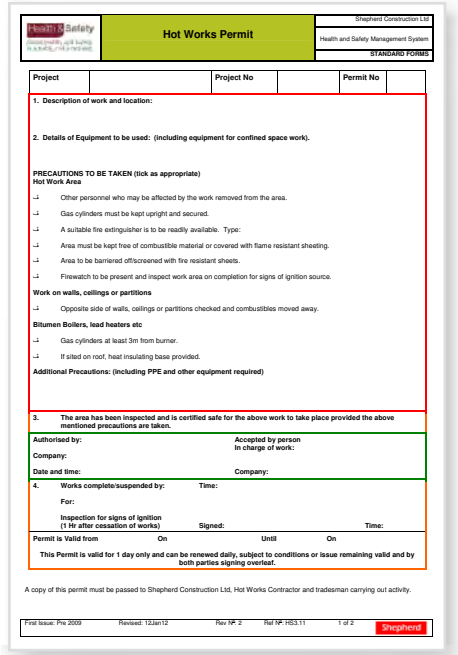
- Manual call points should be mounted at least 1.4m from the floor and sited where they can be easily seen.
- Manual call points should be sited on the floor landings of stairways and not obstructed by materials etc.
- Fire alarms must be checked every week and the inspection recorded on SCL Weekly Fire Inspection.( Refer to SCL Fire and Evacuation Minimum Standard).
- Air horns should be checked visually and replaced as required.
- An audible test must be undertaken every week on wired / wireless systems.
- Maximum travel distance from any point in the building to the nearest call point must not exceed 30m.
- Alarm systems must have fault monitoring indicating capabilities for all call points, sounders and power supplies.
- Alarm sound levels throughout site areas must not be less than 65db.
- Alarm systems must have a control and indicating panel that has the ability to start, silence and test the system.
- A copy of the operation and maintenance manual for the system must be available on site at all times.
- Servicing of the alarm system must be in accordance with the manufacturer's recommendations.





## Hot Work Areas

- Any person carrying out hot work must physically hold a permit accepted by SCL.
- The work area must have been assessed for fire risk by a Supervisor before any work has started.



Health & Safety

**Hot Works Permit**

Shepherd Construction Ltd
Health and Safety Management System
STANDARD FORMS

| Project | | Project No | | Permit No | |
|---|---|---|---|---|---|

**1. Description of work and location:**

**2. Details of Equipment to be used: (including equipment for confined space work).**

**PRECAUTIONS TO BE TAKEN (tick as appropriate)**
**Hot Work Area**

- ☐ Other personnel who may be affected by the work removed from the area.
- ☐ Gas cylinders must be kept upright and secured.
- ☐ A suitable fire extinguisher is to be readily available. Type:
- ☐ Area must be kept free of combustible material or covered with flame resistant sheeting.
- ☐ Area to be barriered off/screened with fire resistant sheets.
- ☐ Firewatch to be present and inspect work area on completion for signs of ignition source.

**Work on walls, ceilings or partitions**

- ☐ Opposite side of walls, ceilings or partitions checked and combustibles moved away.

**Bitumen Boilers, lead heaters etc**

- ☐ Gas cylinders at least 3m from burner.
- ☐ If sited on roof, heat insulating base provided.

**Additional Precautions: (including PPE and other equipment required)**

**3. The area has been inspected and is certified safe for the above work to take place provided the above mentioned precautions are taken.**

**Authorised by:** **Accepted by person In charge of work:**
**Company:**
**Date and time:** **Company:**

**4. Works complete/suspended by:** **Time:**
**For:**
**Inspection for signs of ignition (1 Hr after cessation of works)** **Signed:** **Time:**

**Permit is Valid from** **On** **Until** **On**

**This Permit is valid for 1 day only and can be renewed daily, subject to conditions or issue remaining valid and by both parties signing overleaf.**

A copy of this permit must be passed to Shepherd Construction Ltd, Hot Works Contractor and tradesman carrying out activity.

First Issue: Pre 2009 Revised: 12Jan12 Rev №: 2 Ref №: HS3.11 1 of 2 Shepherd

- All precautions reflected in the PTW (permit to work) must be in place and checked by a sub-contractor supervisor or manager before work starts.

For all hot work activities ensure the following;

- Correct PPE is worn.
- Suitable extinguishers are at hand.

**CAUTION**

HOT WORKS AREA!! SCL PERMIT REQUIRED





- A careful watch maintained for fire during the work activity.
- Monitoring the hot work area thoroughly for some time after the work has finished (typically this will be at least an hour).
- Gas must be stored in an upright position.

- Gas must be stored in lockable cages, in minimal amounts outside of the building.

## NOTES...





## NOTES...

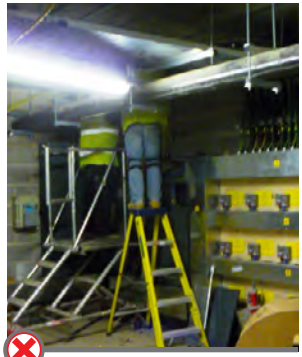
## Stepladders

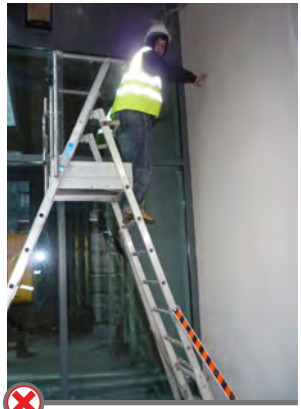
- Stepladders can only be used if they are the only practical means of access.
- SCL stepladder permits must be issued to all stepladder users with specific risk assessment carried out.
- Users must hold a copy of the permit at all times.
- The stiles, the steps and the top platform must not be damaged in any way.
- The hinge mechanism must be functional and the stepladders will lock open in the correct position.
- The steps must be clean and free from contaminants.
- The feet must be present and in good condition.
- Ensure the stepladder in use is not faulty or defective.
- Stepladders must be tagged with an inspection tag and inspected within the previous 7 days.

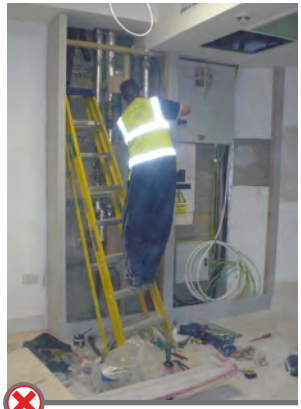





- Stepladders can only be used for short duration works only e.g (up to 30mins).
- Users must be trained and instructed to use the equipment safely.
- The stepladder must be long enough to safely reach the work.
- The stepladder must be level.
- The user must face in the direction of work at all times.
- The user should maintain 3 points of contact at all times.
- Stepladders must not be used as a leaning ladder.
- Users must not use the top three steps of a stepladder unless a suitable extending handrail is available.









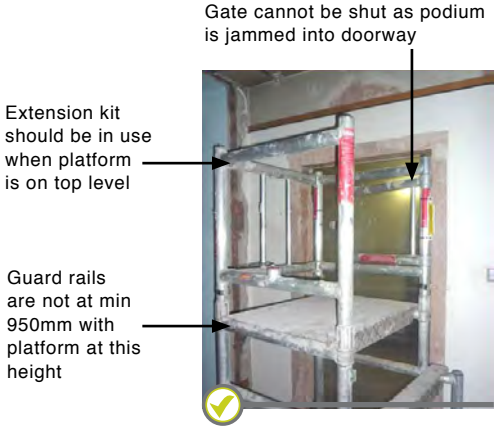


## Hop Ups


- Single width (300mm) Hop ups are not permitted.
- Hop ups must conform to BSEN 131 – Class II industrial.
- Risk Assessments must be carried out for use of Hop ups as part of work task.
- Hop ups are for short term duration (up to 30 mins) works in hard to access areas (risers, cupboards etc).
- Hop ups must be maintained in good condition by users.
- Weekly recorded checks are required by all Sub-contractors.

## Podium Steps

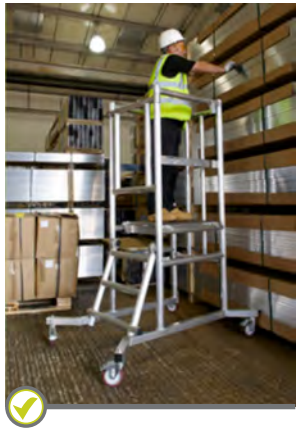
- Podium steps must be in good condition/clean/ welds visible.
- Users must be trained/ familiarised.
- Brakes must be applied at all times when in use.
- Gate must be shut when in use.
- Guard rails must be at the correct height for the platform and extension kits used as required.
- Additional braces / climbing steps must be used as required.
- All locking clips must be in place at all times.








- Podiums must be checked on a weekly basis and Scafftags visibly displayed and legible.
- Name of Sub-Contractor must be visible on each tag.
- Tags must be pulled when podium not in use.
- Consideration must be given at all times by users to maintaining access and egress for others in work areas.
- Refer to Work at height Minimum Standard for further guidance.





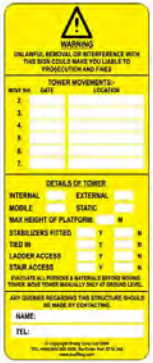





## Mobile Aluminium Towers

- Only PASMA trained competent persons may be permitted to erect, use or dismantle towers

- Towers must be erected and used on firm ground
- Static towers must have metal base plates.
- Castors should be locked into the base and brakes fitted and locked when the tower is in use.
- All towers must be fitted with Scaff-tag type signs.

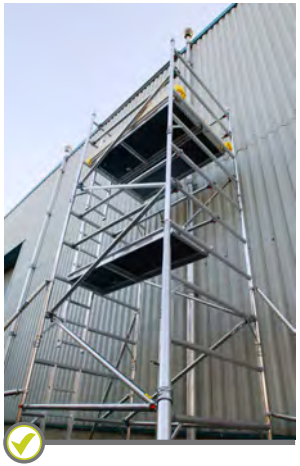



- Everyone must follow the manufacturer's instructions for erection, use and dismantling.
- A copy of the instruction manual must be available - if the scaffold has been hired, the hirer should provide this information.
- Ensure the height to base ratio is in line with the manufacturer's instructions.
- Where a tower is likely to be exposed to wind loading, or where the maximum recommended height to base ratio needs to be exceeded, the scaffold should be tied to the structure it is serving, or be designed to ensure stability by means of ground anchors, guys or kentledge.
- Platforms must be fully boarded and be at least 600mm wide.
- Platforms must be protected from tipping or sliding by being properly supported and by the use of cleats or other proprietary fittings.
- Loads on the platform should be evenly distributed.
- Any trap door or hatch on the platform should be closed when the platform is in use.





- Guardrails and toeboards must be fitted on all four sides of the platform.
- Guardrails must be 950mm above the platform with the distance between the top of the toeboard and the middle guardrail not exceeding 470 mm.
- Diagonal bracing should be correct as per manufacturers instructions.



- The platform must have a safe means of access, always on the narrowest side of the tower.
- Proprietary internal ladders must be used for access.
- Climbing up the outside of the tower is not acceptable.
- Guardrails and toe boards must be fitted on any intermediate platforms that are also being used as working platforms or for storing materials.





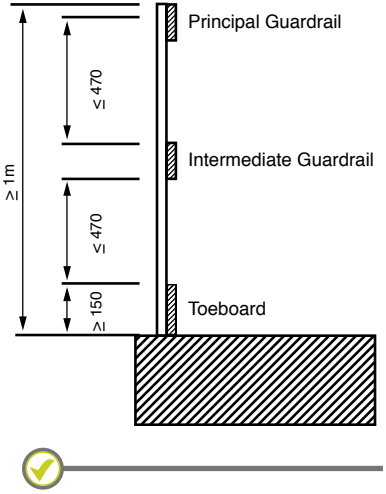
## Edge Protection

- Edge protection must be considered through the design process on items such as steel members/false work/ formwork etc. and must be in place at the point of installation to prevent the need for further work at height.
- Design details/ approvals of systems must be available on site.
- The security, strength and stability of supporting structure must be verified as adequate.
- The base connections for any edge protection must be suitable and fitted correctly to the structure.
- Counterweights must be correct to design/ manufacturer's instructions.
- The guardrail must be at least 1.0m high and also have an intermediate rail fitted.
- Toe board must be at least 150mm above the working surface, with no gap through which a 20mm sphere could pass.
- Ensure the class of edge protection is appropriate for slope of working surface (see overleaf).
- Check there are no gaps in protection greater than allowable for class. (470mm for up to 10° slope, 250mm for up to 30° etc).
- Ensure all the components and connections are in good condition.
- Overleaf explains the requirements necessary for the

various classes of edge protection.

## CLASS A

- Provides protection to flat surfaces and slopes up to 10 degrees. It provides resistance to static loads and is based on the requirements to support a person leaning against it, walking beside and possibly stumbling against the edge
ection.



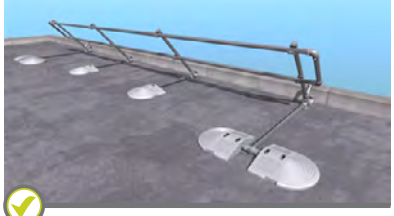


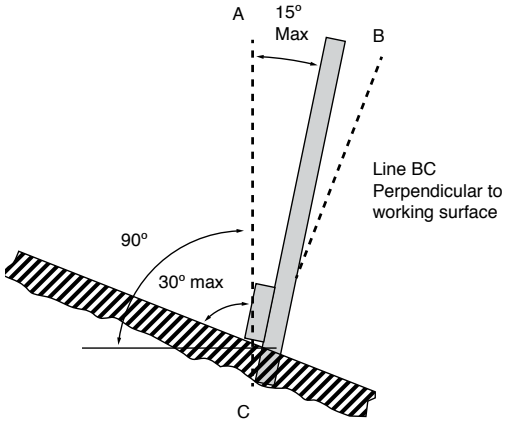



Edge protection fitted after installation of steel

## CLASS B

- Provides protection to flat surfaces and slopes, generally up to 30 degrees and to even steeper slope lengths. It provides resistance to both static and low dynamic loads and is based on the requirements to support a person leaning against, walking besides, possibly stumbling against and sliding down a sloping surface towards the edge protection.



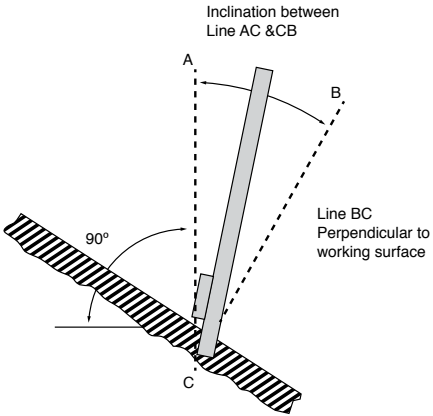







## CLASS C

- Provides protection to steeply sloping surfaces, generally up to 45 degrees and up to 60 degrees for 5m slopes. It provides resistance to high dynamic loads only and is based on the requirements to contain a person sliding down a steeply sloping surface.



Only the rebar is preventing a fall.

Further clarification of the detailed classification requirements, edge protection systems and products, installation guidance and safety requirements can be found within BS EN 133374





# Access to Vehicles and Trailers

| Hierarchy of Work for Unloading | Safe systems for off-loading vehicles + trailers |
|---|---|
| Avoid work at height where possible on vehicle beds and trailers. | • Use methods not requiring access to the vehicle e.g.<br>  • Pre slung loads accessible from ground level.<br>  • Grab system on machine boom.<br>  • Forks, forklifts and telehandlers.<br>  • Sidelifters. |
| Use of work equipment to prevent a fall from a trailer or vehicle bed. | • Static access platforms mobile access platforms and MEWPS.<br>• Advanced guardrail systems on delivery vehicles.<br>• Loading docks mobile stair units retractable steps ladders. |

## Hierarchy of Work for Unloading

Work equipment to minimise height and consequence of fall from a vehicle bed or trailer.

## Safe Systems for Off-Loading Vehicles and Trailers

- Collective fall arrest including high level safety nets rigged close to the work area.
- Air bags tight and close to working level.
- Work restraint system preventing access to edge.

Personal fall protection equipment used when working on vehicle bed.

- Personal Fall Protection Equipment (PFPE) (The use of PFPE is a last resort as it is heavily dependent on management, supervision, training and attitude of users.
- Inertia Reels
- Harnesses





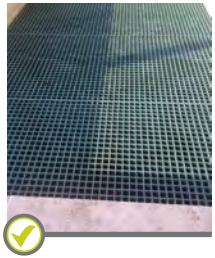

## Edge Protection to Risers and Shafts

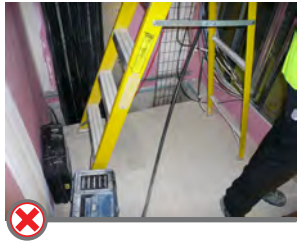
- All shaft openings must be protected with proprietary gate system such as Fullgate. Installed progressively as cores constructed to prevent any need for fall restraint.
- Double guard rails and toeboards to shaft openings are not acceptable.
- Refer to edge protection VISTA.





- Riser protection must be considered through planning of work to incorporate built in solutions.
- Consider reinforcement mesh cast into riser opening and cut out for services progressively
- Solutions such as GRP grating considered to fill voids.
- Minimum double guard rails and toe boards to all riser openings.
- Signage in place to indicate ‘Danger Riser Opening’





## Hole Protection

- All holes or voids inspection/valve chambers or manholes must be protected if there is a risk of persons or materials falling through.

The size and type of holes determine the type of protection but hole covers must be clearly identifiable and marked with ‘Fall Protection Do Not Remove’. A template for spraying this warning is available from M4 signs.







- Hole protection such as plywood should be recessed into a hole where possible. Covers must be chamfered on the edges and placed so they do not create a trip hazard.

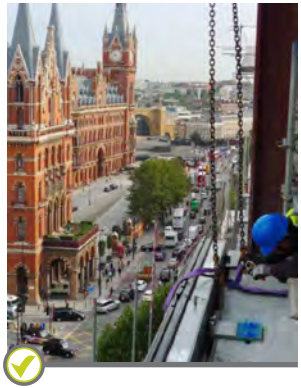
- Covers must be designed to withstand exposure and any point or impact loads.
- Holes subject to additional loads, plant or vehicles require additional assessment and may need the involvement of a Temporary Works Designer.





- On larger projects, with extensive holes or penetrations, consideration must be given to an agreed protection solution which should be monitored for adequacy.
- Hole coverings must allow for secure fixing but also safe removal and refitting. Where the work methods require this, Risk Assessments and Method Statements for operations must cover both the removal and replacement process.
- Sub-Contract Supervisors must be appointed to take responsibility for any on-site management and inspection of holes and voids.
- Where it is impractical to cover larger holes or voids, full edge protection must be provided and consideration given to additional debris netting to stop smaller falling material. Hole protection must be inspected daily by the Supervisor nominated for that area and any deficiencies must be rectified immediately.
- Hole protection must be maintained to a high standard and securely fixed to avoid displacement or tampering.
- Holes should never be left open and unattended

## Tool Tethering



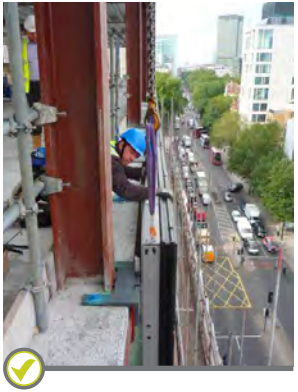
- Any tools being used at height need to be anchored against dropping.
- Lanyards, tethers along with connectors must always be used in between the tools and belt or bag.
- There needs to be a safety provision in between the tool and tethering system on the belt or bag.

- Wrist straps should only be used if they provide protection against injury caused by de-gloving.
- When there is a need for more tools, a tool bag / belt with structural anchorage loops must be used.
- If required ,log tools in and out on a tool register, to make sure that no tools are left at height.





- Ensure barriers are in place below the work area and make sure the extent of the barrier area is appropriate for the work being done at height.
- Make sure that any grating is safe and make use of mats and temporary covers where there is the possibility of small items falling through gaps.
- Wherever scaffolding must be used, make sure toe-boards are fitted.



- Ensure operatives are aware of other activities taking place around and beneath their work at height activity.
- Check tools are in good condition, not loose, corroded, or damaged e.g. check hammer heads are secure, tool lanyards, tethers, connectors and anchorage points.
- An equipment inspection record must be mantained by those undertaking the activity.

## NOTES...





## NOTES...

## Work Clothing

- Wet weather clothing e.g jackets, trousers, leggings, one piece suits made with PVC-coated nylon or cotton should be provided for protection against rain or chemicals.
- Cold weather clothing must be provided as required, for sub-zero temperatures, thermal garments should be provided.
- Chrome leather aprons and overalls with flame-retardant finishes must be provided for welding and burning work to protect against sparks and molten metal.
- High visibility clothing e.g. jackets and waistcoats must be provided for all work.
- Chapter 8 of the Traffic Signs Manual lays down specific requirements for high visibility clothing when used in highway activities.





- General purpose overalls, coveralls and boiler suits should be worn where possible to provide protection from general dirt, dust and low risk oils, chemicals, etc.
- Tracksuit bottoms are not acceptable as protective work wear and long sleeves should be worn as required to protect exposed arms.
- Specialist operations such as contaminated site working, concreting, and asbestos stripping and lead work will require the use of disposable overalls.
- Protective clothing for chain saw activities must include ballistic leg protection, jackets, plus gloves as a minimum.
- Personal buoyancy equipment is required for work over water.

## Mandatory PPE

- All sites are designated hard hat areas, these will be indicated by “safety helmet” signs. All operatives working in these areas must wear safety helmets, unless otherwise clearly indicated. Woolly hats should not be worn under Hard hats as they affect the fit. Helmet liners should be utilised.
- Every person should check their safety helmet and arrange for replacement as necessary.
- A Sikh who is wearing a turban is exempt from the requirement to wear head protection.
- Chin straps are required on helmets if working at height.





- Task specific hand protection must be used for all work activities. Fingerless gloves are not permitted. Hand protection must be worn in all areas unless otherwise stated.
- All persons on site must wear safety footwear (with steel toecaps and mid-soles) at all times. Footwear must be maintained in good condition with adequate grip on soles so it does not contribute a slip, trip or fall.

- High visibility clothing including vests and jackets must be worn at all times unless risk assessment can demonstrate otherwise.

- Clothing must be maintained and in a clean condition. Plant operators and Slinger Signallers must wear orange hi-vis vests.





- An adequate provision of Visitors PPE must be available for loan to visitors. Visitor PPE kits are available to order. All visitors PPE must be printed with ‘Visitor’ clearly marked on helmet and rear of vest/coat.

## Working with Concrete

Contact with concrete can cause both dermatitis and burns. Skin affected by dermatitis feels itchy and sore, and looks red, scaly and cracked. Cement is capable of causing dermatitis by two mechanisms - irritancy and allergy.

- Irritant dermatitis is caused by the physical properties of cement that irritate the skin mechanically. The fine particles of cement, often mixed with sand or other aggregates can abrade the skin and cause irritation resulting in dermatitis.
- Allergic dermatitis is caused by sensitisation to the hexavalent chromium (chromate) present in cement.


- Wet cement can cause burns if wet cement becomes trapped against the skin, for example by kneeling in it or if cement falls into a boot or glove, a serious burn or ulcer can rapidly develop.





- All operatives must wear a full Tyvek type suit or suitable coveralls to protect skin when working with concrete. Refer to work clothing VISTA.
- Operatives must wear wellingtons under the suit. Trouser bottoms to be either taped to the wellingtons or ensure the bottoms of the trousers are tightly fitted (elasticated) to prevent concrete contamination.
- No wet clothing is to be worn and there should be no exposed skin.

- Operatives must not kneel in concrete.
- Clean drinking water must be available at the workface and clearly marked as such in order to wash off any splashes etc.
- All personnel placing concrete must wear the correct type of gloves to prevent absorption of wet concrete.
- All personnel must wear correct eye protection to prevent splashes entering the eye.
- All personnel must be aware of the health effects of concrete burns.

# Eye/ Ear/ Respiratory Protection


## Eye Protection

When eye protection is required;

- The eye protection in use must be suitable for the task (including UV light protection) and there is no other feasible means of preventing eye injuries.
- Light eye protection must be worn for activities such as carpentry/joinery.
- Goggles must be worn when debris / materials can be ejected e.g. from grinding and breaking activities.
- Full Face Shield must be worn for activities such as welding and breaking.
- Eye protection must be fitted correctly.
- Eye protection must be clean and compatible to other protection such as RPE
- Pre-use checks must be in place.





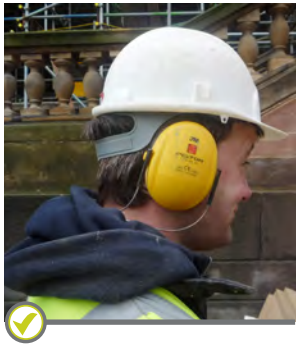
- All users must be trained in fitting, wearing and storage and are aware of the hazards.

## Ear Protection

When ear protection is required;

- The ear protection selected must offer the right protection for noise levels being generated.
- All users must be trained in fitting, wearing and storage.
- Pre-use checks must be in place.


- Equipment must be maintained and stored in line with manufacturers guidelines.
- Ear protection must be provided in the correct vessel e.g. ear plugs are in a clean dispenser
- Spares must be available.
- Banded ear protection must not be worn with a safety helmet.



- Hearing Protection zones must be identified by sufficient signage.
- All users must be aware of the health effects of Noise Induced hearing Loss and be able to recognise the symptoms and who they should report them to.





## Respiratory Protection

Where Respiratory Protective equipment is required;

- RPE should always be the last resort, consideration should first be given to elimination, substitution or engineering control i.e. local exhaust ventilation.
- A filter mask must be worn where there is a foreseeable risk of inhaling dust or any fibres which are harmful to health - SCL require a minimum of FFP2 to be used.


- Nuisance masks are not suitable to protect against inhalation of fibres/ dust. Filtered face pieces must be used.

- RPE must be adequate and suitable to the wearer (via face fit test), the task and any other protective equipment, i.e. eye protection in use.
- Face area must be clean shaven.
- User must be trained in correct fitting, adjustment, use and storage.
- RPE must not exposed to dirt, solvents, contaminants which could affect the seals.
- RPE must be stored according to the manufacturer's instructions. Storage cases must be available if required.
- Replacements/spares must be available.





## Harnesses and Landyards

Before considering types of fall arrest equipment ensure the hierarchy of control has been followed. Prevention must be considered first. It is not acceptable to opt immediately for fall arrest equipment.

### Hierarchy of Control for Work At Height

- FIRST - prevent fall hazards so far as reasonably practicable.
- SECOND - if this is not possible to achieve, use working platforms and install guard-rails and toe boards which comply with the Work at Height Regulations.
- Consider the use of MEWPs or Scissor lifts.
- If all other measures are not practicable or not reasonably practicable to fully achieve provide personal suspension equipment. "Personal suspension equipment" means suspended access equipment (other than a working platform) for use by an individual and includes a boatswain's chair, abseiling and rope access equipment but it does not include a suspended scaffold or cradle.
- If all of the above are not practicable then provide fall arrest equipment.
- There needs to be good reason why a properly guarded work platform is not appropriate.
- All personnel working at height must be fully aware of the rescue procedure for the activity they are undertaking.

All harness users must;

- Ensure the harness is put on like a jacket, and adjust the chest strap, so it is tight but comfortable. Stepping into a full body safety harness is extremely bad practice. Not only does it increase the risk of slips trips and falls if the harness is placed on the ground, but it could pick up all kinds of dirt and contamination.
- Check the dorsal plate is correctly located on rear of harness between the shoulder blades.
- Check the chest strap is located correctly so the wearer cannot be struck in the face in the event of a fall.





- Ensure correct D ring is used relative to working position, i.e. front or back dependent on location of anchor point ( this will prevent the user twisting in a fall) The easiest way to gauge the correct tension of the leg straps is to tighten it until 2 fingers fit between the webbing and the leg. Two finger tension means placing the middle and index finger perpendicular to the webbing around the front area of the leg.
- Lock the harness with a buckle used for adjustment with at least one slider to lock it. (plastic or rubber loop that slides up and down the webbing).

Harness users must ensure;

- Anchorage points are suitable for imposed loads.
- Shock absorbing lanyard length do not exceed 2M including energy absorber and connectors.
- That if the user needs to turn round under an anchor point a lanyard incorporating a swivel should be used to prevent the lanyard twisting.

- They never tie a knot in a lanyard to make it shorter, it reduces the lanyard strength by 50%.
- Shock absorbing lanyards are not connected together to increase the lanyard length, as this will lead to increased fall distances higher and excessive fall arrest forces on the user, anchor points and lanyard.
- Their harness has received inspections every 3 or 6 months (as identified in Risk Assessment) by a competent person and this has been recorded.
- Lanyards are not wrapped around sharp or angular edges.
- Lanyards and Harnesses are stored away from contaminants preferably hung up.
- All lanyards are indelibly and permanently marked (BS EN 365: 1993).





Harness/Lanyard checks
Equipment should be checked by the user for the following;

- Cuts.
- Abrasions.
- Broken stitching.
- Swelling.
- Unusual patterns.
- Fraying.
- Burns.
- Chemical damage.
- Weld spatter.
- Discoloration.
- Deformed and damaged hardware including distortions, cracks, corrosion and pitted surfaces.

## NOTES...





## NOTES...

## Housekeeping and Good Order

Poor housekeeping can lead to the following issues:

- Poor storage of materials and damage – which costs our projects money.
- Rubbish left to accumulate – which can be a fire risk and cause accidents.
- Restricted or blocked access – which slows down work and productivity.
- Overflowing waste skips and bins – which take up space and look untidy.
- Trailing cables –which can cause trips or falls.





- Ensure the workforce clearly understand the company requirements to maintain a clean, tidy, and well organised site as part of their day-to-day work.
- Sub-contractors must plan their waste removal strategy for all activities.
- Work areas must not be allowed to become untidy. Stop work and tidy up if necessary.
- Reduce the amount of waste and packaging and banding/pallets to prevent a build-up of waste.
- Ensure work areas are kept clean and well organised as part of any work activity.
- Ensure there are adequate/suitable waste containers to dispose of al types of waste in work areas.
- A poor standard is not acceptable.

## Material Management

- The location and size of space to be allocated to each Sub-contractor for materials must be planned and take into account handling, storage and convenience of movement to the workface. Failure to do this could result in the site becoming heavily congested.
- The coordination of material movement and storage must be a key part of managing the project.


- The SCL Project team must ensure allotted storage areas are marked on a site plan and issued to each Sub-contractor
- The Sub-contractor storage area must be defined by signage with the contractors name displayed.





- The distance between storage areas and work activities should be kept as short as possible to reduce transportation which could create H&S issues such as manual handling or plant movement.
- Flammable and hazardous substances must be used in line with manufacturers requirements and only stored in flame resistant containers.
- Storage areas and work areas must be sited within the reach of any static plant such as a tower cranes to facilitate the movement of material.
- Just in time delivery and the use of off-site storage should be considered where possible to reduce the amount of material on site at any one time.

- Material required at a particular work face should be accurately calculated to reduce excess material and any waste being left behind.
- Material must not be stored or laid down in walkways, fire escape routes or vehicle routes.
- Material stored in work areas must be clearly barriered off and managed to maintain access and egress for pedestrians.





- Fragile material such as glass must be adequately protected and banded or strapped when being stored and transported around site up to the point of installation.

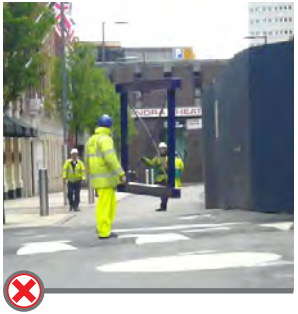
# Lifting Operations Exclusion Zones

- Access within the immediate lifting zone during lifting operations must be restricted to those involved in the work.
- The work area should be clearly marked/defined by;
  - Crowd control barriers around the crane and any laydown area. (Bunting is not acceptable).
  - Signage to indicate hazard 'Lifting Operations Do Not Enter Exclusion Zone' must be displayed.






- The lifting zone must be controlled by a dedicated person where possible. The persons responsible for this aspect of the work must be identified in the Lifting Plan, together with the means of communication/ signalling.
- The path of the load to its final position must be considered and the workforce must be excluded from any area where loads pass overhead.
- A 10m exclusion zone must be clearly defined and maintained around the base of any tower crane being erected.
- When lifting operations take place outside the site boundary, traffic/ pedestrian controls must be in place to stop vehicles/ the public passing under slung loads being lifted.
- Road closures must be properly permitted and managed to prevent any risk to the public.

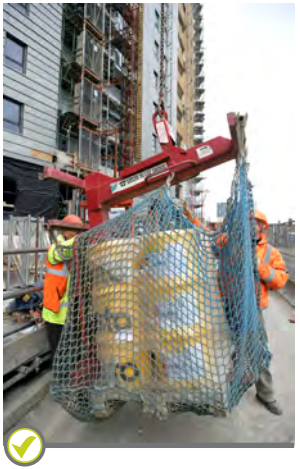


## Lifting and Slinging

- Lifting plans should be in place – prepared by a CPCS trained Appointed person.
- A crane supervisor must be on site at all times to oversee the work.
- Any person involved in Lifting Operations must have read & understood the lifting plan, and the relevant risk assessments for the lifting activities.
- The Appointed person must have ensured correct selection, use and storage of lifting accessories.
- There must procedures to ensure maintenance, examination and testing of lifting equipment and accessories is in place.
- Defective equipment must be taken out of use.
- All accessories must be stored in clean and dry storage.





- Only agreed/safe slinging methods must be used
- Only trained personnel must attach and detach loads.
- Loads must be secure when lifted and the weight of loads/SWL of equipment must be known.


- Sharp edges on loads must be protected to prevent damage to slings etc.
- Correct hand signals must be given or adequate radio communication maintained.
- The lift team must be aware of overhead power cables or any proximity hazard.
- Slung loads must not pass over other workers. The path of the load must be considered.





## Excavations Including Access

- The type of support for excavations must be suitable and designed if necessary. Scaffold boards, old floor joists and sheets of plywood are not appropriate.

- The position of all buried services must be made known to all machine operators and ground workers. The SCL Permit to dig must be in place for all operations involving breaking ground.
- Access into excavations, via suitable ladders (or stairs in large excavations) should be available and located in the supported section of the excavation.
- Ladders must be secured and extend 1m past the landing place, or another handhold made available.
- Spoil and materials should not be placed at the edge of the excavation, where they will add to the effective depth of the excavation.

- Ensure material such as pipes cannot roll into the excavation and that heavy material such as concrete manhole rings do not place an undue strain on the sides of the trench.
- Store spoil and materials the same distance away from the edge of an excavation as the depth of the excavation.

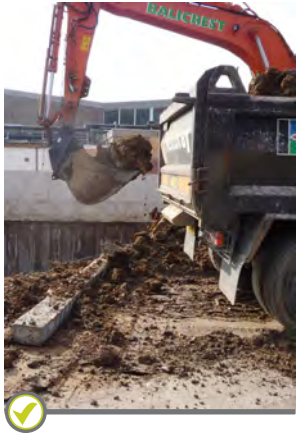
- Where it is possible for persons or plant to fall into an excavation, effective barriers must be erected at each accessible face. Barriers should be at least 1m high and set 1m back from the edge if not rigidly fixed.





- Where the sides of an excavation are battered or stepped, ensure the correct angle of repose for the type of soil No attempt should be made to increase this angle.
- Operatives must be protected from the risk of inadequate ventilation in an excavation and gas monitors used as necessary.
- Excavations must be inspected at the beginning of each shift before any work starts.
- A weekly recorded Inspection must carried out (if excavations are open for 7 days or more) and submitted to the SCL project team.

- Where it is foreseeable that children may enter the site out of work hours, then all excavations must be backfilled at the end of each day, or protected by a 2m high fence, or similar.
- If materials are being placed into an excavation by mechanical means, positive barriers i.e. stop blocks must be positioned to prevent vehicles from falling in.
- Operatives must not work in any unsupported section of an excavation.
- If a trench is being hand dug there must be adequate support in place.





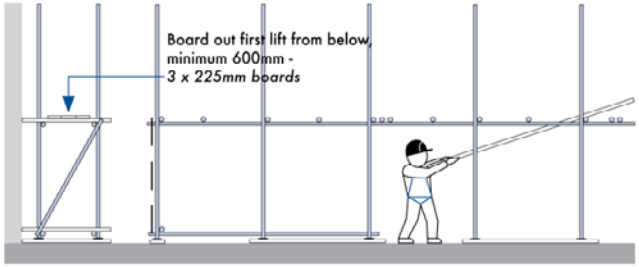


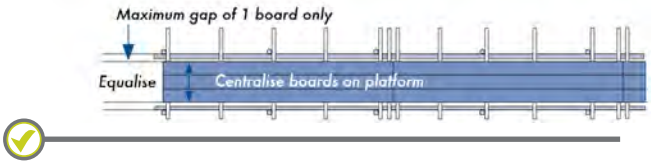

## Scaffolding

- All scaffolders must be competent and hold a CISRS card (or in the case of trainees, supervised by a competent person) for the erection of either tube and fittings or system type scaffolds.
- An advanced Scaffolder must be on site to oversee the erection of any designed scaffold.
- All those involved in scaffolding operations must wear and use a full body harness fitted with a lanyard, shock absorber and a scaffold hook for one handed operation or suitable proprietary anchoring attachment.
- A 3 board lift with a single guard rail, an advanced guard rail or alternative platform such as Scaffstep must be utilised for erection.
- Collective measures must take priority over the use of a harness.

- Scaffolders must not traverse unguarded lifts or climb on scaffold. Lifts should be boarded out from below.

**Erecting, Altering and Dismantling Scaffold**: Please note that the drawings incorporated below are not for construction purposes but for demonstrating the use of fall arrest equipment.








Scaffstep

- When raising or lowering materials scaffolders must be clipped on at all times or work within a safe handling platform with a double guardrail.
- Tube and fitting steel scaffolds will provide a safe anchor point for any scaffolder wearing a full body harness as a last resort when other protective measures, such as guard rails are not suitable.
- Temporary stairs or ladders should be included as early as possible in the erection process and removed as late as possible during dismantling, removing the need for scaffolders to climb the scaffold
- The opening for ladders must be protected with a trapdoor or a proprietary gate.





- A rescue kit must be kept close to the workface for works on scaffold where a rescue provision is required.



- All standing scaffolds must be tagged to indicate inspection status and updated every 7 days. Tags should be located at the lowest access point on the scaffold.

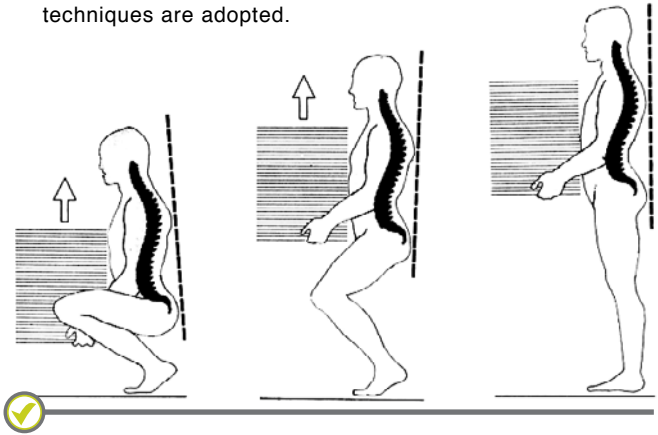
## Manual Handling

- Mechanical handling aids must be utilised where possible to eliminate the need for manual handling in work activities.
- Proprietary aids such as the Gorilla Gripper should be considered for handling sheet material which is the cause of many common musculo-skeletal injuries.
- Consideration must be given to the use of handling aids or how material is packaged to reduce manual handling risks.
- The weight of items must be known by all involved in the task or be displayed on material being handled.





- If Manual Handling is required all persons involved in a task must be trained and instructed to ensure the right techniques are adopted.







Good manual handling technique must be adopted by

- Keeping feet apart, giving a balanced and stable base for lifting. Leading leg as far forward as is comfortable.
- Adopting a good posture
- Bending the knees so that the hands, when grasping the load, are as nearly level with the waist as possible. Keep the back straight.
- Getting a firm grip
- Keeping the arms within the boundary formed by the legs.
- Not jerking the body when lifting.
- Carrying out the lifting movements smoothly, raising the chin as the lift begins, keeping control of the load.
- Moving the feet. When turning to the side, move the feet- do not twist the trunk.
- Keeping the load close to the trunk for as long as possible. Keep the heaviest side of the load next to the trunk.
- Precise positioning of the load is necessary, put it down first, then slide it into the required position.

# Power Tools/ Abrasive Wheels

## Before use

Electrical tools must be checked to ensure;

- The tool is fitted with the correct plug.
- The lead is not cut or frayed and that it is effectively clamped at entry to the tool and plug.
- There are no cracks or pieces missing from the tool casing.
- That all screws are in place and secure.
- The permissible number of power tools on each circuit or transformer is not exceeded.
- That the extension lead is suitably rated for the electrical current.

- That if using an extension lead on an earthed tool, check that the lead has an earth wire.





## During use;

- DO disconnect the tool before adjusting or working on it
- DO disconnect the tool when not in use
- DO report any defects immediately
- DO keep the tool clean and free from damp
- DO wear appropriate protective equipment - goggles, hearing protection, RPE as required
- DO always hold the side handle, where applicable
- DO NOT carry the tool by its cable
- DO NOT use any “makeshift” cable.
- DO NOT try to repair a defective tool - report it
- DO NOT start or stop tools when under load or hold a drill by the chuck to tighten it to a drill bit
- DO ensure all drill bits are sharp.

## When using cartridge operated tools;

### DO

- DO ensure that the tool is in good repair
- DO ensure that you know the misfire procedure – Hold tool against work surface for 30 seconds; pull trigger again; if the cartridge still does not fire, wait another 30 seconds. Then eject cartridge (strictly in accordance with manufacturer's instructions)
- DO ensure that the tool is at right angles to the fixing surface.
- DO use the correct fixing - piston - cartridge combination.
- DO change pistons when they are worn.

### DO NOT

- DO NOT use a suspect tool.
- DO NOT use force when loading a cartridge (booster).
- DO NOT load a cartridge before you need it.
- DO NOT leave a loaded tool lying about.
- DO NOT point the tool at any person.
- DO NOT fix less than 75 mm from the edge of concrete or brick.
- DO NOT fix less than two and a half times the fastener's shank diameter from the edge of steel.
- DO NOT fix into a spalled surface or existing hole.





### DO

- DO change stop rings when they are damaged.
- DO wear the safety goggles provided.
- DO ensure that the tool is cleaned and lubricated after use.
- DO keep cartridges not being used in the tool box or container.
- DO use ear protection, especially when fixing to steel, or working in a confined area.

### DO NOT

- DO NOT fix where another fixing has failed.
- DO NOT strip down the tool without checking that it is unloaded.
- DO NOT press a tool against your hand.
- DO NOT leave live cartridges lying about the site.
- DO NOT insert a cartridge until after the nail or stud is loaded.
- DO NOT attempt to use nails, studs or cartridges which have not been approved by the manufacturer.

## When using abrasive wheels,

- The guard must be in position and properly adjusted.
- Grinding on the sides of cutting wheels must be avoided.
- New or re-fitted wheels must be run load free at full operational speed for a short period before they are used, and during the trial run the area should be clear.
- The speed marked on the machine must not exceed the speed marked on the wheel, blotter or identification label.
- Ensure that spindles cannot become overheated through lack of lubrication.
- Abrasive wheels must not be stopped by applying pressure to them.
- The use of warped wheels or exerting pressure on the sides of them must be avoided.
- Ensure the workpiece is rigidly supported and firmly clamped in place.
- No loose clothing must be worn and long hair should be tied back.





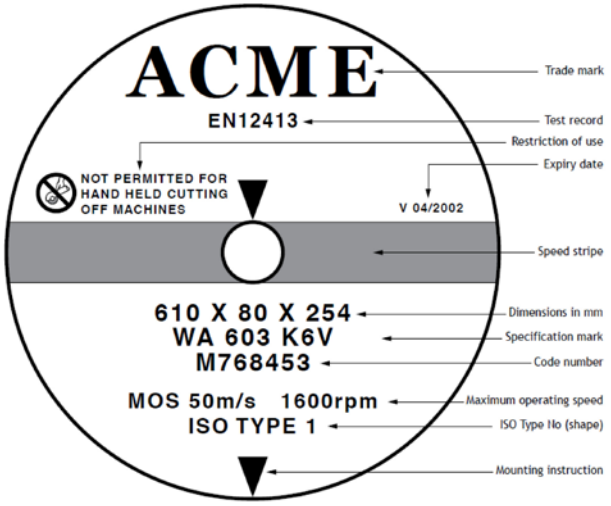



**Figure 1** British Standard system for specifying abrasive wheels from BS EN 12413: 1999[3] and BS ISO 525: 1999[5]

- Appropriate eye protection must be worn at all times
- Suitable respiratory protection must be provided and/ or dust extraction or suppression.
- An assessment of the exposure to noise must be carried out and suitable ear protection provided by the sub contractor.
- An assessment of exposure to vibration must be undertaken and exposure logged as required

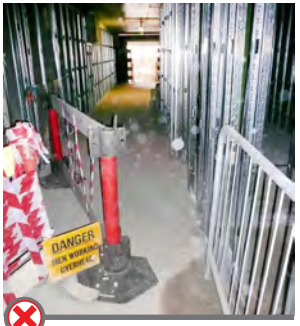
## Hazard Exclusion Zones


Hazard exclusion zones must be in place to separate the workforce from particular risks associated with certain activities, including;

- Demolition works including use of explosives.
- Removal of asbestos or use of harmful substances.
- Excavation.
- Plant movement.
- Piling.
- Mechanical lifting.
- Core drilling/cutting/ sawing/bursting.
- Post tensioning or stressing.
- Raised access floor installation.
- Use of specialist equipment, i.e. pipe threading machines.








- Scaffolding (including dismantling).
- RC Frame Construction
- Rigging and de-rigging of plant/hoists etc.
- High pressure jetting
- Works creating noise/ dust.
- MEWPS.


- Any activity where there is potential for material to fall from a height as that material cannot be effectively prevented from falling by a safe system of work will require an exclusion zone to be created.

Exclusion zones must include the following as relevant;

- Rigid barriers to physically prevent access from all directions if there is a major hazard.
- Secondary containment such as debris netting/ scaffold fans etc. if required.
- Bunting or demarcation tape to highlight a hazard, ,i.e. edge of raised access floor.
- Clear signage warning of the hazard, i.e. 'falling objects'
- A marshal or 'watcher if required.
- All site personnel must be made aware of any Exclusion zones on a daily basis through the daily huddle, toolbox talks or pre-task briefings.





## Plant and Equipment

General requirements that must be in place include;

- Operators must be over 18 years of age and possess a current driving licence.
- If it is to be used on public roads ensure that the vehicle is fitted with number plates, tax disc, horn and the operator has a valid driving licence.
- Operators must have had machine-specific training for the piece of plant they are to operate provided by an approved training organisation.
- All Operators must have a CITB Construction Plant Competence Scheme card.(CPCS)
- Operators must carry out and record the weekly checks of their machines, copies of the manufacturers operating manual must also be available with the machine.
- Operators log books should be checked when they are inducted to assess their experience.

- Check that regular maintenance and servicing has been carried out to the manufacturer's requirements.
- Ensure all plant is fitted with a reversing alarm, flashing/rotating amber beacon mounted at the highest practicable position and mirrors and/or CCTV as appropriate to ensure the driver has adequate vision all around the machine from the operating position (as a guide, the driver should be able to see a one metre long rod placed one metre from the machine in any position).

Forklifts and telehandlers

- Forklifts and telehandlers must be thoroughly examined by a competent person in accordance with the LOLER Regulations. Records of thorough examination must be available to SCL for inspection prior to the machine being put to use.
- Operators must carry out checks on the condition of the access routes, loading bays, storage areas etc. and report any problems to the SCL Project team immediately.
- All keys must be removed from plant by the operator when not in use.

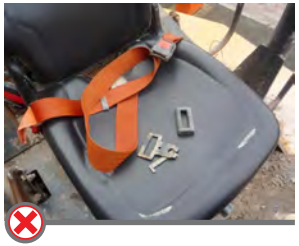




- Suitable loading areas must be provided.

- No passengers are to be carried on any machine.
- Man-riding on the forks is prohibited unless a proper constructed cage is provided. In this instance the cage and forklift/telehandlers must also have been thoroughly examined in the previous six months.
- Speed restriction notices must be displayed on sites where vehicles/plant are operating. Operators must comply with speed restrictions on the site.
- The machine must never be overloaded.
- The forklift/telehandler should never travel with the load unnecessarily raised.

- Machine drivers must wear SCL standard PPE.
- When the machine is not in use, the forks must be lowered to the ground; the pressure released from the hydraulic systems and the engine immobilised.
- Keys should be kept in a secure place and issued only to the operators.



- Refuelling must be strictly controlled and should be confined to a location remote from any drains or watercourse. When refuelling by hand, operators must use a funnel or container with a spout to prevent spillage. If spillage's occur the operator must clean up immediately with the spill kits provided and notify their supervisor.
- Ensure seat belts are fitted and worn.
- Machine operators must only use the designated traffic routes.





Additional requirements for Dumpers include;

- Operators of dumpers and similar plant must stop the engine, apply the brakes, get off the machine and stand clear whenever it is being loaded.
- Before driving off, operators should check foot and hand brakes, steering and tyres.
- Tyre pressures should be checked weekly. The tyre pressures for each machine will be advised by the manufactures.
- Tyres must be checked every day for wear and tear. Where the tread is worn too less than 2mm, the tyre must be changed.
- Passengers are not permitted unless special passenger facilities or seats are provided. Seat belts must be fitted and must be worn.
- The vehicle should never be driven in such a way, or in such conditions that it can cause injury to the operator or anyone else.
- The dumper should never be loaded in such a way that visibility is restricted.
- When the machine is left unattended, gears must be left in neutral, then engine switched off, the handbrake applied, the tipping body lowered and it must be immobilised by removing the key.
- Safety helmets, safety footwear, eye protection, gloves and high visibility clothing must be worn.
- Don't allow reversing without being sure it is safe to do so, or under the direction of the banksman.
- Ensure roll over protection structures (ROPS) is fitted together with seat belts.

Additional requirements for excavators include;

- Fully automatic quick hitches should only be used on excavators and operators must be fully trained on their attachment /detachment.

- Defective equipment must be removed from service immediately.

- Employees should be kept away from the swing area; a clearance of 600mm clearance should be maintained around the swing area, or block-off access to the area.





- If the excavator is to be used as a crane, then ensure that a lift plan is in place.
- Don't allow work on steep gradients before checking the manufacturers operating instructions.
- Protective measures such as stop blocks must be in place to prevent excavators running into open excavations.
- On wheeled excavators, the parking brakes should be applied and the stabilisers lowered to the ground (or axle locks engaged) before any excavation work is commenced with the backhoe.
- Excavators should never be left unattended with the engine running.

## Underground Services

When carrying out works where there is a risk of underground services which cannot be isolated or diverted, Sub-contractors must;

- Obtain layout drawings from the statutory authorities via SCL.
- Consult the statutory authorities/service owners and follow any advice given.
- Complete SCL permit to dig/break ground.
- Ensure only a competent person uses cable and pipe locating devices.
- Mark and identify route of services.
- Dig carefully by hand to establish and confirm position of buried services. Hand held power tools, mechanical excavators; etc. Must not be used within 0.5 metre of the indicated line of a buried service.
- Ensure that once services are exposed and identified, they are clearly marked using appropriate signage/ marker tape at least every 2m.





- Stop work immediately if an unidentified service is located, and the safe system of work reviewed.
- Ensure exposed services are adequately supported once surrounding earth has been removed.


- The SCL Project team must ensure an up to date drawing showing the position of all existing, new and temporary services on site is maintained and made available to all Sub-contractors.

## MEWPs and Ground Conditions

When using MEWPs, always;

- Ensure the manufacturer's records regarding inspection, maintenance and servicing are available on site.
- Ensure audible reversing alarms are fitted.
- Ensure regular inspections, maintenance and servicing is carried out, i.e. weekly checks by operator and before use, six monthly inspections by a competent person. Records of these must be available for inspection.
- All MEWPs must have a MEWP tag displayed to show daily inspections have been carried out by the operator.
- Ensure all the relevant test certificates and duty charts are provided with the machine.
- Ensure the manufacturer's operating manual is available with the machine.
- Ensure the operators of the machine are trained, holding the relevant category of CPCS or IPAF card.






- Ensure barriers are used around base of MEWPS.

- Ensure the SWL, the safe wind speed and safe operating gradient is displayed on the machine. An anemometer must be held on site by all sub-contractors using MEWPs.
- Ensure ground is level, firm and the machine is not over any drain, basement. Where rough terrain equipment is used, the manufacturer's requirements on ground conditions must be followed and engineered ground may be required.

- Ensure outriggers/ stabilisers are fully deployed and rigger pads used as required.





## Use of Knives

- Knives must be kept sharp – the excess pressure required to use a blunt knife is most likely to result in injury as the knife slips.
- Knives must be used that are suitable for the task being undertaken e.g. the hooked linoleum knife for cutting floor covering.
- Safety knives must have auto retracting blades or blade guards must be used.
- Knife users must wear a minimum of cut resistance level 4 gloves at all times to protect their hands. The protection level of the glove is identified by a number 4 as the second digit of the four digit code printed on the pictogram on the glove (Figure 1) Resistance level 5 is the maximum for cut resistance.


Relevant European Standard identification mark and pictogram

4 digit code indicating resistance to abrasion, cut, tear and puncture

Conformity marking


Fig 1

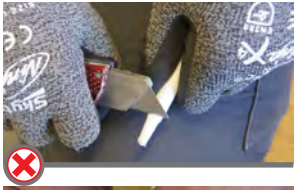
- The European Standard EN 388 applies to all kinds of protective gloves in respect of physical and mechanical aggressions caused by abrasion, blade cut, puncture and tearing.
- Protection against mechanical hazards is expressed by a pictogram followed by four numbers (performance levels), each representing test performance against a specific hazard. The ‘mechanical risks’ pictogram is accompanied by a 4-digit code.
  - A .Resistance to abrasion based on the number of cycles required to abrade through the sample glove.
  - B. Blade cut resistance based on the number of cycles required to cut through the sample at a constant speed.
  - C. Tear resistance based on the amount of force required to tear the sample.
  - D. Puncture resistance based on the amount of force required to pierce the sample with a standard-sized point.





- Knife users must be properly trained in the correct cutting motions for the activity being carried out. Always cut away from the body.

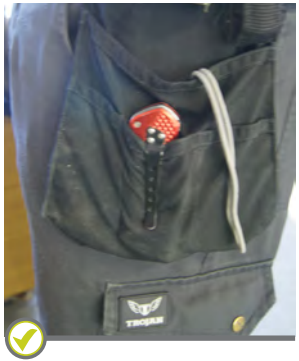
- Always cut on a stable surface and do not rest items to be cut against legs or arms or place the hands in the path of the cut.

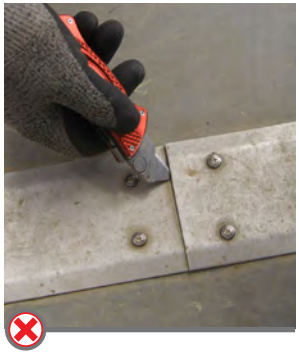


- When not in use, knives must be sheathed, the blade retracted, or placed in slotted racks. If knives have to be carried, they should be sheathed.

- Knives must never be used to prise open containers or used to force items items apart.

- Razor blades must only be used in suitable holders.





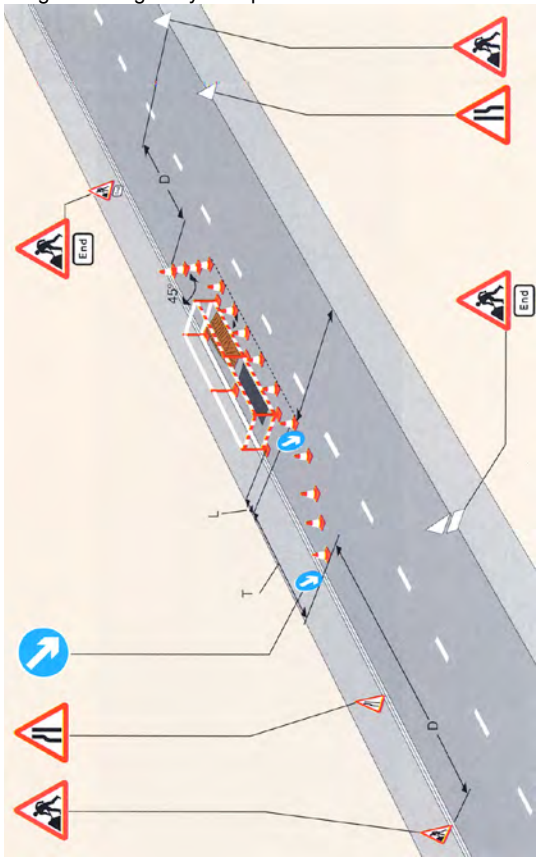




## Chapter 8 Traffic Management

- Works on footways and pavements must leave at least 1.5m unobstructed width where possible and 1m minimum.
- Where 1m minimum unobstructed width is not obtainable, an alternative safe route for pedestrians must be provided.
- Temporary pedestrian walk ways should never be less than 1m wide and, where possible, they should be 1.5m or more in width.
- Rigid barriers must be used to mark any temporary footway and to protect pedestrians from traffic, excavations, plant and materials.
- Road danger lamps must be placed at the ends of the barriers at night.
- Hand rails should be between 1.0 and 1.2m above ground level and tapping rails should be fixed with the lower edge approximately 150mm above the ground.
- If the temporary footway is in the carriageway, signing will be necessary for both pedestrians and drivers as shown in the illustration (overleaf). The provision of kerb ramps (GRP only) or raised footways may also be necessary to help blind, elderly or disabled persons, or for those with prams or wheelchairs.
- All work activities including delivery of materials outside the site boundary in public areas must be completely segregated and barriered off.
- The risk to the public from the use of hot substances, noise, dust, flying objects and holes and trenches are adequately considered and controlled.

Single carriageway 30mph road




For more info refer to streetworks code of practise

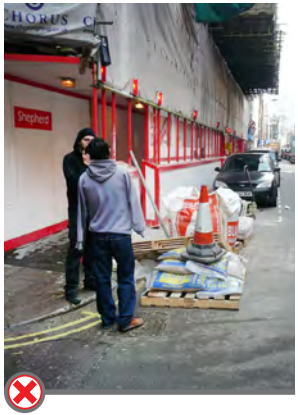
Typical Arrangement for pavement works





- Only GRP type trench covers and ramps with anti-slip finish are to be used on pavements. Road plates must not be used on pavements to cover trenches or excavations without some form of anti-slip coating being applied to the roadplate.

- No material, waste or arisings must be left in the street.
- No skips to be sited in the street without Highway Authority permission.
- No puddles or running water from site activities to be allowed to accumulate on/or across footpath.
- Any temporary fencing and hoarding must be correctly erected and checked daily.








## NOTES...

## NOTES...





## Prevent Exposure to Silica Dust

**Dust Hierarchy of control**

- Eliminate / Substitute
- Segregation / Zoning
- Dust / Water Suppression
- Engineering Controls (e.g. LEV)
- RPE / PPE

Supervision
Instruction
Training

- Risk assessments must adequately assess the exposure of a person to silica dust.
- In cases when it is reasonable to expect dust levels to be significant, atmospheric sampling will be required. As a general rule levels greater than 0.1mg/m3 can be regarded as significant and will require monitoring.

- Risk Assessments must be set out in detail the manner in which the control measures are to be monitored, supervised and maintained.
- First of all, try to eliminate silica dust from the work altogether, i.e. use a block splitter instead of a cut off saw to cut blocks.





- If silica cannot be eliminated, exposure must be minimised.
- Respirable silica dust release must be controlled using dust suppression techniques, local exhaust ventilation, or totally enclose the work area.
- Stone cutting abrasive wheels must be fitted with a water suppression system.

- Respiratory protective equipment must also be worn in addition to any suppression technique. For the dustiest processes, positive pressure or airline breathing apparatus must be utilised.
- Correct RPE (minimum level is FFP2) must be worn. Refer to Eye, Ear, Respiratory Protection VISTA.
- All users must be trained, face fit tested, and checked by activity supervisors.
- Segregation / Zoning / Signage must be displayed as per Hazard exclusion VISTA.





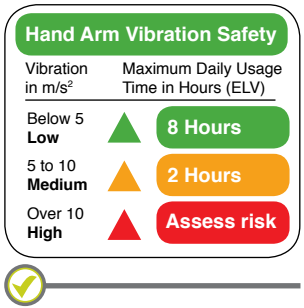
## Hand Arm Vibration Syndrome (HAVS)

Hand arm vibration is vibration transmitted into the hands and arms from the use hand of held powered work equipment. Too much exposure to vibration can cause HAVS and carpal tunnel syndrome. The symptoms include;

- Tingling and numbness in the fingers (which can cause sleep disturbance).
- Not being able to feel things with the tips of the fingers.
- Loss of strength in the hands (less able to pick up or hold heavy objects).
- In the cold and wet, the tips of the fingers going white then red and being painful on recovery (vibration white finger).
- Long term exposure can result in permanent disability.
- Managers and supervisors must check tool users regularly for any symptoms.

If any work is being carried out that involves excessive use of vibrating tools or plant that could contribute to the symptoms of Hand Arm Vibration, employers must;

- Identify employees at risk from HAVS.
- Make a valid estimate of their exposures, compared with the Action Value and Limit Value.
- Identify the need for immediate action if the Limit Value is exceeded.
- Consider the available and appropriate options for controlling risk.
- Produce an action plan for control and arrangements to monitor progress against the action plan.
- Make arrangements for periodic review of the assessment.
- Reduce exposure to a minimum by using alternative tools or processes to avoid exposure.
- Provide information and training on the risks and their control.








- Provide appropriate health surveillance when exposure reaches the exposure action value:
- Exposure action value (EAV) of 2.5 m/s² A(8) or 100 exposure points.
- Exposure limit value (ELV) of 5 m/s² A (8). or 400 exposure points.

- Excessive hand trimming of piles must be avoided. Pile croppers or debonding sleeve techniques should be utilised.
- The use of technologies such as remotely operated machinery must be utilised to reduce the potential exposure of personnel to vibration.
- The use of paint-on retarders and power jetting to avoid scabbling operations must be considered as way of reducing exposure.
- Drill bits and tool points must be kept sharp to reduce vibration.





Sub-Contractors must ensure;

- The use of suitable low vibration tools.
- Operators check tools before using them to make sure they are properly maintained to avoid increased vibration caused by faults or general wear.
- Cutting tools are kept sharp so that they remain efficient.
- Operators avoid gripping or forcing a tool or work piece more than is necessary.
- Tools are stored so that they do not have very cold handles when next used.
- The work pattern/ environment is assessed and monitored - it is beneficial to have regular breaks and to keep warm and dry throughout the activity to allow the blood to circulate.
- Correct operative selection- smoking, poor fitness, age, strength and hereditary conditions may increase individual susceptibility to HAVS.

## Skin Protection

Work-related skin problems are caused or made worse by coming into contact with substances such as chemicals, and also through having wet skin for long periods while at work. Dermatitis (also known as eczema) is by far the most common, and skin cancer can also be caused by unprotected exposure to sunlight.

In the construction industry, the main substances that cause most skin health problems include;

- Wet concrete used in RC frame and general concrete works.
- Epoxy resins and hardeners used by floor layers.
- Acrylic sealants used by window installers and 'mastic men'.
- Bitumen or asphalt used by road layers and roofers.
- Solvents used in paints, glues or other surface coatings.
- Petrol, diesel, oils and grease.
- Degreasers, de-scalers and detergents used by cleaners and general work activities.
- Water.

Dermatitis usually affects the hands and forearms; however, the face, neck or chest, and legs can also be affected. Signs of dermatitis include redness, swelling, blistering, flaking and cracking. It can lead to itching, bleeding and pus formation.





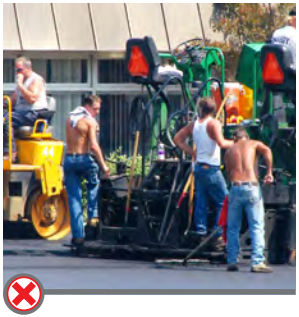
- Irritant contact dermatitis is a local inflammation of the skin.
- It can develop after a brief heavy, single exposure (acute) or be due to repeated and prolonged exposure (chronic) to hazardous agents.
- In some cases more than one substance may be involved.
- Allergic contact dermatitis occurs when someone becomes allergic to something that comes into contact with their skin.
- The allergic reaction can appear hours or days later.
- Once the allergy has developed, subsequent contact with even tiny amounts of the material can trigger an allergic reaction.

- Risk Assessments must adequately assess the risks arising from potential exposure to skin sensitisors and COSHH Risk Assessments and Safety data sheets must be available for all hazardous substances.
- Sub-contractors must aim to eliminate the substance or activity that causes dermatitis to prevent need to rely on other measures, eg training or PPE, which can be difficult to apply successfully.
- If elimination is not possible, substitute the hazard by using a safer substance or changing the way the task is carried out( such as using pre-mixed mortars or pre-painted materials, but be aware that substitution might create different risks that will need to be assessed and managed.
- If substitution is not possible, the right type of PPE must be selected and supplied to personnel.
- Suitable gloves must be worn at all times, and must be adequate to protect the hands, by preventing permeation of any harmful substance or being sufficient to withstand potentially corrosive substances.





- Pre and post work soaps, cleaners, and creams must be provided within welfare facilities.
- Supervisors and Managers must monitor and check periodically that skin protection measures are being properly implemented.
- Sub-Contractors must ensure they make adequate provision to protect their personnel from the harmful effects of sun exposure by encouraging the workforce to cover up and providing sun creams for any exposed skin, with a sun protection factor (SPF) rating of 30 or more as it protects against UVA and UVB.



# Hazardous Substance Protection


Hazardous substances encountered in the Construction Industry include;

- Chemicals and products containing chemicals.
- Fumes.
- Dusts.
- Vapours.
- Mists.
- Gases and asphyxiating gases.
- Biological agents (germs). If the packaging has any of the hazard symbols then it is classed as a hazardous substance.
- Germs that can be encountered that could cause diseases such as leptospirosis or legionnaires disease.





To ensure adequate levels of control and protection from hazardous substances, Sub-contractors must;

- Plan and operate processes and activities to minimise emission, release and spread of substances hazardous to health.
- Carry out suitable COSHH assessments and provide these to SCL.
- Take into account all relevant routes of exposure – inhalation, skin absorption and ingestion – when developing control measures.
- Control exposure by measures that are proportionate to the health risk.
- Choose the most effective and reliable control options which minimise the escape and spread of substances hazardous to health.
- Provide suitable personal protective equipment where adequate control of exposure cannot be achieved by other means.
- Check and review control measures regularly for their continuing effectiveness.
- Inform and train all employees on the hazards and risks from the substances they work with and the use of control measures in place to minimise the risks.
- Ensure that the introduction of control measures does not increase the overall risk to Health and Safety of any person even those not directly involved with the task.
- SCL must maintain a COSHH register.

## Asbestos removal by HSE Licensed Contractors

- Only asbestos removal contractors and laboratories with the necessary HSE licence, experience and training are to be used on SCL Projects.
- Notifications must be in place for all asbestos removal.


- A suitable specific plan/ method statement must be in place, outlining the method of work and any health and safety issues raised by the initial assessment;
- Facilities provided by the asbestos removal contractor must be suitable and must not obstruct any general access/egress. This applies particularly to the enclosure, the hygiene facility and air ducting. Before work starts, the enclosure within which the asbestos removal contractor is to work, must not permit any escape of asbestos fibre into the atmosphere. SCL must witness the smoke test being carried out. The enclosure must include a viewing panel.






- A maintenance / inspection schedule must be in place for the enclosure and any air extraction equipment.
- Asbestos must not escape into the atmosphere during the asbestos stripping operation.


- An adequate personnel decontamination procedure must be in place so that asbestos is not released from personnel transiting to and from the workplace.

- The area being stripped must be clean, both visually and with the supporting air sampling results provided to SCL.
- Removal of the enclosure must not give rise to the release of asbestos fibre; (Air monitoring must be carried out)
- The storage of the asbestos on site must not give rise to asbestos fibre release and all asbestos must be effectively removed being double bagged and in locked skips.
- The works must be overseen by a non-working Supervisor/ Manager with sufficient experience to ensure that all requirements are complied with and to ensure that any other matters of good practice are implemented.





## Inhalable and Respirable Dust and Fumes

- All work activities which generate dust or fumes must have adequate suppression measures in place
- Inhalable dust is defined as airborne material which is capable of entering the nose and mouth during breathing
- Respirable dust means very fine airborne material which is capable of penetrating to the deepest part of the lung.

- All wood dust (including dust from composites like chipboards, MDF and fibre boards etc.) is hazardous to health: it can affect the nose, the respiratory system (and lungs) and the skin.
- Dust respirators will give no protection at all against gases and vapours (e.g. from paint spraying).
- Dust respirators filter the air breathed by the wearer to make it safe to breathe. They are not suitable for use where the amount of oxygen in the air may be low, such as in confined space working which will require breathing apparatus, which provides air from an independent source such as a cylinder.

When work activities are carried out, where dust or fume is likely to be generated, specific control measures and protective clothing/equipment must be used. These precautions should be selected with advice from specialist contractors, manufacturers, and COSHH assessments. Points to consider include;

- Type of material
- Work to be carried out
- Area to be worked in
- Period of exposure
- Position of worker i.e. bending down

In some cases, there will be a need for atmospheric sampling of respirable dust and fume. Results of this monitoring will assist in determining the degree of control measures required. Following the assessment, detailed precautions must be established, and must include:

- The control measures
- The monitoring arrangements
- The supervision
- The maintenance arrangements

When considering the control measures the following hierarchy of controls must be considered:

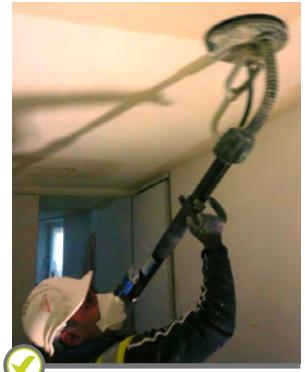
- Designing out at the planning stage, the need for scabbling, drilling or high speed cutting of materials

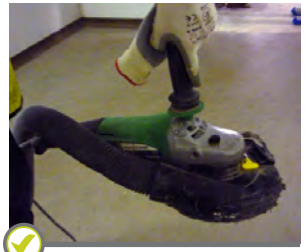
- Controlling dust or fume by using local exhaust ventilation (LEV) at the point of work.



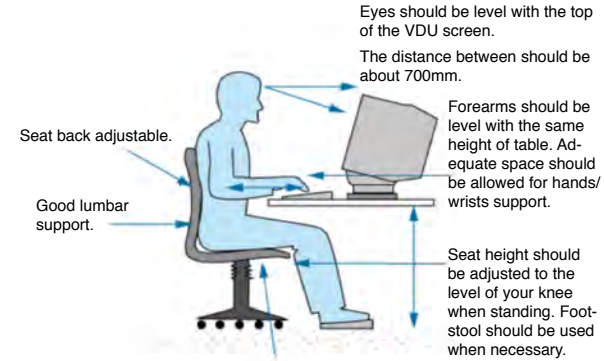


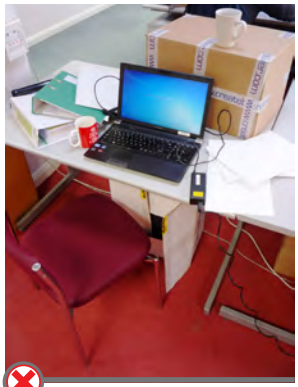
- The use of respiratory protective equipment (RPE) as a last resort only
- Use of debris netting, hoarding, sheeting etc.
- All types of RPE restrict the wearer to some extent by making it more difficult to breathe and reducing visibility. This is why it is important to control exposure by other means such as extraction.
- Engineering controls such as LEV will protect everyone in the workplace - a respirator will only protect the person who wears it.





## Use of VDU Equipment







Anyone using VDU equipment for more than 2 hours at a time is classified as a habitual user. Habitual VDU users must ensure;

- The “online DSE Self-Assessment” and ‘e’ learning module must be completed as and when necessary. (Refer To Learning Dept).
- If you are a laptop user, ensure you have a mobile workstation (stand, mini keyboard and mouse) so correct postural position can be established. Laptops must not be placed flat on the desk surface.
- Seat chair in use has 5 point castors, has adjustable and removable arms, adjustable height and postural support.
- Work equipment (e.g. phone, computer screen and keyboard) must be positioned to ensure “over reaching” does not occur.
- There are fully functioning blinds at windows so glare can be controlled.
- A clean computer screen.
- Desks are clutter free and tidy.
- All VDU equipment is serviceable - if it is damaged or not working correctly, report it to IS Services.
- Sufficient lighting around working area.
- To take regular breaks from VDU work and do another task to minimise postural hazards.
- To report to line manager any neck, shoulder, back and arm pains, headaches or eyestrain, that could be attributed to VDU work.
- To keep underneath desk space clutter free.
- To have their eyes tested every 2 years as a minimum.

## NOTES...





## NOTES...

## Waste and Waste Containment

- Locate skips away from watercourses, gullies and drains.
- Ensure waste is segregated.
- Make this easy for site personnel to do, by providing several waste containers in a designated waste storage area and briefing personnel on their requirements.
- Mark waste containers clearly with signage highlighting their intended contents.







- Use containers suitable for their contents.
- Check that containers are not corroded or worn out.
- Where practicable, use covered skips to prevent spread of wind-blown wastes.
- Prevent any liquid wastes leaching from bins or skips.
- Store liquid waste is in a container with secondary containment.

## Hazardous Waste

- Ensure the project is registered as a producer of hazardous waste, if more than 500 kg is likely to be generated (England and Wales only).
- Ensure hazardous wastes are stored in suitable labelled containers away from sensitive receptors and away from the risk of damage by site traffic.
- Hazardous waste must not be mixed with non-hazardous waste.





- Do not mix different types of hazardous waste together.
- Do not store wastes longer than is necessary to complete documentation to arrange their disposal.
- Hazardous waste movements must be documented using consignment notes rather than the normal waste transfer note.

## Water/ Waste Water

- Identify all water sources potentially affected by the project, gain appropriate consents/licences and put measures in place to fulfil the requirements of the consent/licence.
- Sub-contractors must define suitable controls to prevent pollution entering pathways to water sources or water table and reaching receptors, such as filters/ containment etc.





- Identify site drainage as surface, combined or foul water and suitably colour code and mark on the site plan. Cover drainage as required.
- Sub-contractors must manage the wash out of concrete lorries in a suitably contained designated area and ensure designated washout area is at least 10 m away from drains and waters. If not drains must be protected.
- Sub-contractors must protect surface and groundwaters from washout.
- Silty or discoloured water should not be discharged from the site.

# Noise/ Dust/ Emissions

- Carry out regular road sweeping, manual sweeping, scraping and jet washing to remove excess build-up of materials on site and public roads.
- Damp down.
- Clean the wheels of vehicles leaving the site so that mud is not spread onto the highways.
- Obtain consent from the regulator for the use of mobile plant for crushing materials such as bricks, tiles and concrete and locate away from sensitive receptors.





- On cutters and saws, use equipment and techniques such as dust extractors to minimise dust.
- Consider a wet cutting saw or use vacuum extraction or block splitters.
- Take account of the wind conditions when arranging activities that are likely to emit aerosols, fumes and odours.
- Ensure vehicles and plant used on site are well maintained and regularly serviced.
- Make sure that engines are switched off when they are not in use.

- Change the working method to use equipment or modes of operation that produce less noise.
- Where possible, place sources of noise away from sensitive receptors.
- Consider placing screens close to sensitive receptors but not parallel to nearby walls (1 m above the highest sight line).
- Adopt working hours to restrict noisy activities to less sensitive periods of the day.
- Arrange delivery times to suit the area – daytime for residential areas, perhaps night time for commercial inner city areas.
- Route construction vehicles to take account of the need to reduce noise and vibration.

- Keep haul roads well maintained.
- Undertake noise monitoring.





- Change the working method to use equipment or modes of operation that produce less vibration, for example: breaking out concrete, where practicable, should be undertaken using equipment that breaks by bending rather than by percussion.
- Undertake vibration activities as far away as possible from sensitive receptors.
- Adopt working hours to restrict high vibration generating activities to less sensitive periods of the day.
- Suitable anti-vibration mountings should be fitted where practicable to rotating and/or impacting equipment.
- Consider using rubber linings on tippers in sensitive sites.

# Stockpile Management

- Segregate different grades of soil.
- Position spoil and temporary stockpiles away from watercourses and drainage systems.
- Minimise movements of materials in stockpiles to reduce degradation of the soil structure.
- Silty water formed by erosion of the stockpile should be managed correctly.
- Direct surface water away from the stockpiles to prevent erosion at the bottom.





- Place silt screens around spoil heaps to trap silt from any surface water runoff.
- Vegetate long-term stockpiles to prevent dust in dry weather conditions, and reduce erosion of the stockpile to form silty runoff. Ensure adequate weed control.

## Contamination

- If indicated, undertake exploratory investigations of the site to characterise contamination on site in terms of: type; concentration; extent and location.
- Ensure relevant permits are in place for any remedial works required.
- Agree the remediation strategy with the local planning authority.
- Do not stockpile contaminated soil unless it cannot be avoided
- If it is necessary, stockpile only on a hard standing area to prevent contamination of underlying ground.





- Take care when handling, storing and using oils and chemicals.
- Consider additional welfare requirements such as showers if dealing with contamination.
- Agree what additional PPE is required for de-contamination and/or working in contaminated ground.
- Cover stockpiled material to prevent wind-blown dust (potentially contaminated) and to prevent ingress of rainwater.
- Ensure a protocol is in place for managing 'hotspots of contaminated ground if they are discovered.
- Control surface drainage from stockpiled area.

- Water draining from a stockpile may be contaminated and need controlled off-site disposal.

## Generators and Pumps

- All generators must sit in a spill tray or a suitable bund. Cover the drip tray if necessary to prevent it filling with rainwater.
- Always use a fuel funnel to fill the tank to avoid accidental spillage of fuel.
- NEVER start the engine if there is a fuel spill.
- Any spillage must be wiped clean and the generator allowed to dry before attempting to start the engine.

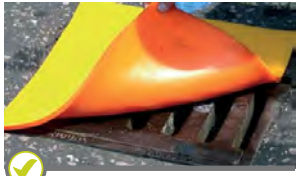




- Know where all spill kits are and how to use them.
- Ensure periodic servicing in line with manufacturers guidelines.
- Take account of the wind conditions when arranging activities that are likely to emit fumes, or odours.
- Empty drip trays regularly to ensure no spillages, and never allow them to overflow.
- Follow hazardous waste procedures when emptying.
- NEVER allow anyone, not fully familiar with the equipment to use the equipment.

## Spill Management

- All projects must establish adequate spill stations and sub-contractors must provide spill kits on bowsers etc.
- Practice annual spill response drills to ensure knowledge of plans and how to use clean-up equipment.
- If a spill occurs stop work immediately.
- Remember Safety first - use PPE (gloves, eye protection etc.) Switch off any sources of ignition.
- Identify the source of pollution and stop it, if safe to do so (e.g. turn off tap).
- If you are unsure whether hazardous materials are involved seek advice and clear the immediate area.
- Prevent the spillage from spreading.
- Check the site drainage plan - where will the spillage go? Divert away from drains/watercourses if possible.









- Use sand, earth or absorbent material to dam the flow, use booms on water.
- If the spill has already entered the drains, block the entrance to the drains to stop further spillage entering the system.


### The Pollution Control Hierarchy

**Preferred response**
- Contain at source
- Contain close to source
- Contain on the surface
- Contain in the drainage system

**Least preferred response**
- Contain on or in the watercourse

## Storage/ Use of Oils and Fuels

- Securely store all containers that contain potential pollutants (e.g. fuels, oils and chemicals) according to oil storage legislation.
- Label all containers clearly and in suitable containers so that appropriate remedial action can be taken in the event of a spillage.
- All bulk fuel storage should be contained within a double skinned bowser or container or have a bund. That is capable of holding amount stored.


To avoid accidental spillage, bund tanks with a minimum capacity of 110 per cent of the volume of the largest tank or 25 per cent of the total storage capacity, whichever is the greater





- Sub-contractors must regularly check taps and hoses for leakage and signs of damage.
- Avoid storing drums tightly against each other.
- Store drums so that they can all be inspected for leaks.
- Fuel, oil and chemicals should be stored on an impermeable base (this may be part of a bund). Ideally, such materials should be stored away from areas of groundwater contamination risk.
- All containers with valves and trigger guns are to be locked when not in use.
- Spill trays should be placed under plant when refuelling etc.

# Tree Protection

- Check whether any trees on site are covered by a tree preservation order and liaise with local authority.
- Keep vehicles and plant away from protected trees.
- All protected trees must have temporary fencing to mark out area that need to be protected. Signage must state ‘Tree Protection in Place’
- Do not cut or damage any roots greater than 25 mm in diameter within the protected area.






- Wrap protection around any exposed roots until ready for backfilling.
- Backfill holes with care, to ensure that roots are not damaged, and compact backfill lightly.
- Do not store spoil or building materials within protected area or under tree canopy.
- Keep toxic materials such as diesel and cement well away.
- Always avoid damaging bark or branches.