Health & Safety Procedures

26 September 2018

PURPOSE

- To communicate Mega Structures' commitment to its people regarding Health & Safety at work.
- To ensure that the team at Mega Structures clearly understand the requirements and expectations and their obligations regarding Health & Safety at work.
- To outline the manner in which Mega Structures will deal with breaches of procedures and the consequences of failing to follow safe procedures and/or other associated policies.

SCOPE

- These procedures apply to all workers of Mega Structures while at work.
- This also applies to all contractors, subcontractors, visitors, volunteers and trainees.

OVERVIEW

- Mega Structures is committed to providing and maintaining a safe and healthy workplace for all staff and to providing the information, training and supervision needed to achieve this.
- Mega Structures will take responsibility for health and safety training and ensuring workers understand procedures, however, workers need to be aware of their own responsibilities and must comply with the business' health and safety policy and procedures at all times.

BIO HAZARD MANAGEMENT

Ensure that all possible situations where employees have the potential to be exposed to Bio Hazards are identified. This includes but is not limited to:

- Sewage in pipes that have been cut causing spillage.
- Medical waste that has not been disposed of correctly.

A task analysis needs to be undertaken if there is any possible chance you may come in contact with a bio hazard.

In the event of a Bio Hazard spillage we need to:

- STOP work and stop the spill if safe to do so.
- Notify site management.
- Contact environmental manager.
- Contact health and safety manager.
- Avoid skin contact – use appropriate PPE.
- Isolate any drainage points to prevent contaminated liquid discharging into storm or sewer water.
- Seek specialist advice if required.

Treat all body fluids and medical waste as infectious if contact occurs:

- Apply first aid.
- Seek medical attention immediately.
- Blood tests.
- Vaccination if necessary.

If after contacting site management you have clearance to clean the contamination:

- Use PPE -disposable gloves, disposable overalls, face shield and disposable mask.
- Use absorbent materials around the edge of spill.
- Scoop and scraper to dispose of materials in bio hazard container.
- Clean the contaminated area thoroughly.
- Use 1-part bleach diluted to 9 parts water.
- Flood the area.
- Leave 2-3 minutes.
- All disposable PPE items must be placed in the Bio hazards container.

- All employees involved in clean up must ensure that they follow up with high standard of personal hygiene – handwashing and clean up.

COMPRESSED AIR

Some activities and operations make extensive use of compressed air either as a power source or for cleaning down. Compressed air also has the power to kill or maim. It can blast splinters of wood, steel and other materials through skin, into eyes and deep into flesh. It may peel skin or it can burst lungs.

It can even enter the blood stream and stop a heart forever.

- Check air lines and tools before use.
- Fasten all hose connections securely.
- Ensure the correct fittings are available and tied.
- DO NOT use compressed air to blow dust off clothing or skin, it could be fatal.

CRANE

- All drivers and crane crew members are required to have completed an extensive course on crane operations and safety procedures.
- Other site workers are forbidden to take part in any crane operations unless instructed to do so by a Mega Structures foreman.
- Dogmen are responsible for aligning of loads. They must ensure the load is safely slung and checked before lifting commences.
- If there is any concern about safety of a load a Mega Structure foreman must be contacted to advise on the correct method.
- KEEP ALL CRANE EQUIPMENT IN SAFE WORKING ORDER. SEND ANY FAULTY OR DEFECTIVE GEAR FOR ASSESSMENT AND REPAIR IMMEDIATELY.
- Check slings and chains before use.
- Report any frayed or kinked wires and any worn chain links.
- Keep hands well clear of pinch points.
- Follow the directions of the Dogman or Foreman.

EDGE PROTECTION

Edge protection is the use of temporary or permanent protection to prevent persons, objects and materials from falling from one level to another. This can be above or below ground.

Protection shall be provided on the exposed edges of all work areas or alternatively a harness must be worn and must be clipped on at all times. Guardrails, including mid rails and toe boards, are the preferred option.

- The height to the top of the guardrail shall be between 0.9 and 1.1 meters.
- A mid rail is not mandatory on a working platform where a 225-mm high kickboard or equivalent is fitted.
- The guardrail shall be before or vertically over the edge of the platform except: - on scaffolds, the guardrail shall be within 200 mm horizontal distance of the edges of the platform.
- It must be capable of sustaining, without failure or undue deflection, a force at any point of .69kN (70kg) vertically and .44kN (45kg) horizontally.

EXCAVATION WORK

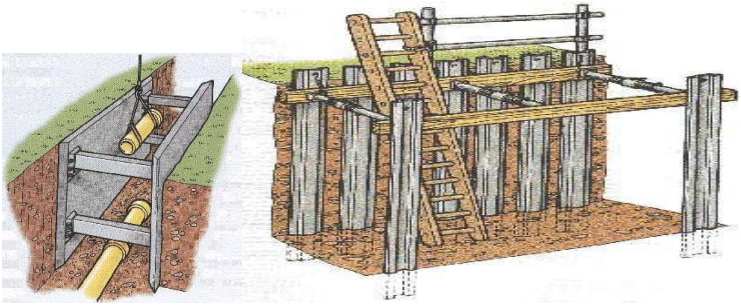
Be aware of the hazards caused by excavation work:

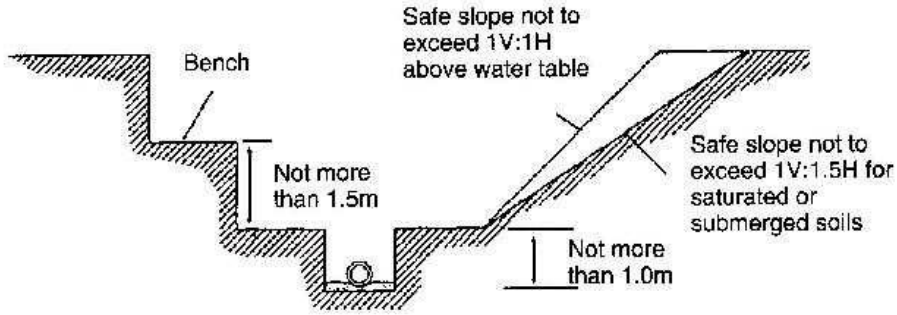
- Collapse due to instability.
- Adjacent structures.
- Existing services.
- Falls into excavations.

Struck-by vehicles and plant mobile plant hazards water accumulation and flood Hazardous atmospheres working near the public or eliminate these hazards:

- Falling loads.
- Use effective measures to isolate, minimise.
- Before you dig – identify and protect adjacent services.
- Look for signs of instability, cracks or movement.
- Batter, bench, shore or use a trench shield.
- Evaluate the impact on adjacent structures.

- Use ladders, barriers, covers, signs.
- Keep materials 600 mm from edge.
- Stay clear of mobile plant, use barriers and use PPE.
- Watch for water accumulation.
- Evaluate the air in excavations.
- Protect the Public.
- Have an Emergency Rescue Plan.



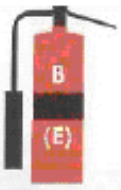
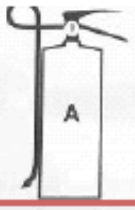


FIRE PREVENTION AND CONTROL

The risk of fire is always present, but can be reduced by keeping work areas clean, and by taking care when using machinery or tools which produce sparks or heat. DON'T SMOKE ANYWHERE NEAR PETROL, SOLVENTS OR OTHER FLAMMABLE MATERIALS. Know where the fire extinguishers are and how to use them. KNOW YOUR FIRE EVACUATION POINT.

- Flammable liquids like petrol are not to be used as cleaning agents. Use only approved cleaning solvents
- Flammable liquids are only to be stored in safety cans specifically manufactured for this purpose
- Store all flammable liquids or combustibles liquids and gases in a well ventilated, cool place free from sources of ignition - Dangerous goods container kept on site with chemicals
- MSDS sheets must be completed
- Do not remove or tamper with fire extinguishers installed on equipment, vehicles or in other locations
- Access to fire equipment must be kept free from obstacles that could delay emergency use. Familiarise yourself with the location and use of the projects firefighting equipment. KNOW THE EXIT ROUTES FROM BUILDINGS AND WORK AREAS
- Extra extinguishers are needed when using open flame tools for cutting or welding
- Extinguishers must be checked monthly, serviced yearly and must be serviced or recharged after use
- Discard and/or store oily rags, waste and similar combustible materials, in metal containers
- Extinguish all matches, cigarettes, cigars and pipe tobacco before discarding. DO NOT SMOKE while fuelling equipment or while in close proximity to refuelling areas.
- Storage of flammable substances in equipment or vehicles is prohibited unless designed for such use
- After using open flame tools, make a thorough inspection of the area for live sparks

Different types of extinguishers are for different types of fires – make sure you know the difference

	Water	Foam	Carbon Dioxide	Dry Chemical Powder	Dry Chemical
					
CLASS OF FIRE	▼	▼	▼	▼	▼
CLASS A Paper, Wood, Textiles & Fabric	✓	✓	✓ IF CONFINED	✓	✓
CLASS B Flammable Liquids	✗	✓	✓	✓	✗
CLASS C Flammable Liquids	✗	✗	✗	✓	✗
(E) Electrical Hazards	✗	✗	✓	✓	✗
VEHICLE PROTECTION	✓ UPHOLSTERY ONLY	✓	✓	✓	✗
FAT FIRES	✗	✓ NOT IDEAL	✓ NOT IDEAL	✗	✓

FLOOR PENETRATION

This procedure relates floors or floor openings that cannot safely withstand the weight of a person.

Always assess against the risk of persons, materials or plant falling to ensure suitably protected.

- All floor penetrations or work areas greater then 150dia. (or sq.) need to be covered with a secured cover, built to the minimum standard of a light duty platform or to suit any greater load.
- All floor penetration guarding or covers must be securely fixed (bolted or pinned) in place to prevent displacement or permanent removal
- Guard rails must be solid mesh to prevent tools, persons or materials falling onto a person below.
- All penetration systems must display a sign to warn people of the floor penetrations.

HAZARDOUS SUBSTANCES

- All containers and containers used for decanting or transferring substances of substances to be labelled correctly.
- Safety data sheets to be obtained when substances are supplied to site and data sheets are readily available on site
- Conducting a risk assessment to identify hazards associated with the use of hazardous substances.
- Health surveillance is provided to a worker if there is a significant risk to health from exposure.
- Health surveillance records to be kept for 30 years.

HOT WORK

When any hot work is carried out there is a risk of fire.

- Operators must have the approved protective gear.
- Obtain a hot work permit
- Screens should be erected
- A fire extinguisher must be nearby, and the area clean.
- Cylinders must be upright and secured.
- If you smell gas leaking, report it immediately!
- This equipment should only be used by experienced operators.
- Any hot work is to be carried out under supervision of the site foreman or equivalently designated person.
- Waste material is to be removed from site at least once a week
- Any combustible waste is to be removed from work site daily
- Work area to be checked one hour after hot works commenced

MANUAL HANDLING

- When lifting. Bend your knees, retain a flat back and use your thigh muscles to lift
- Avoid unnecessary bending. Do not place objects on the floor if they must be picked up again later.
- Avoid unnecessary twisting. Turn your feet not your hips or shoulders, leave enough room to shift your feet so as to not have to twist.
- Avoid reaching out. Handle heavy objects close to the body. Avoid a long reach out to pick up an object.
- Avoid excessive weights. If the load is too heavy, get help or use a mechanical device if one is available.
- Lift gradually. Lift slowly, smoothly and without jerking.
- Keep in good physical shape. Get proper exercise and maintain a good diet.
- Don't lift if mechanical assistance is possible.

USE OF POWER AND PORTABLE TOOLS

A record of tested and tagged power tools will be kept on site in SSSP folder.

Electrical equipment:

- Check all leads, plugs and tools before use, report any damage or problems. Do not use damaged or defective equipment. Protect leads when in use.
- Always use an isolating transformer or earth leakage breaker whether equipment is double insulated or not.
- Tampering with equipment, tools or wiring by unqualified persons without authority is strictly prohibited.
- Electricity seldom gives a second chance.

Portable power tools:

Power saws, grinders, drills.

- MUST HAVE PROPER GUARDS AT ALL TIMES.
- Extension leads, cords and hoses must be place in a manner which will not create a TRIPPING HAZARD or in a way which will not lead them to be damaged by equipment or materials.
- Leads to be kept off the ground, particularly in access ways.
- All portable electric power tools shall only be used with an isolating transformer or earth leakage projection unit whether equipment is double insulated or not.
- Do not use electric power tools when you are standing on wet ground

- Never use a tool that is wet.
- Power saws, grinders and other power tools must have proper guards in place at all times.
- Removing guards or rendering them inoperative is strictly prohibited.
- Power tools should be hoisted or lowered by hand line – never by the cord or hose
- Store tools in a safe place when not in use. Protect them from dirt and water
- All electrical hand tools must be tested and tagged every three months.

USE OF PERSONAL PROTECTIVE EQUIPMENT (PPE)

Your safety equipment is your last line of defence against injury, so please keep it in working order.

Mega Structures considers the use of PPE to be mandatory, which calls for the use of a hard hat, a fully zipped up TTMC approved hi-vis vest or shirt, eye protection, safety gloves and steel toe capped safety boots on all our sites.

- **Eye protection:** Industrial grade eye protection is required at all times.
- **Hearing protection:** Hearing protection is required in noisy areas. If the background noise is so loud that you cannot hear normal conversation, you should wear hearing protection. We will provide you with earmuffs or earplugs.
- **Dust protection:** Respirators of the proper type must be worn whenever dust, fumes, gases, or other harmful atmospheres are present.
- **Hand protection:**
    - Hands and Fingers - Work gloves must be used while handling material
    - Rubber gloves must be worn when working with caustics, acids, solvents, lime, concrete or cement.
    - Only gloves with close fitting wristbands shall be used when handling hot materials.
- **Head protection:** Head Protective helmets shall comply with AS/NZ 1801. Mega Structures blue helmets shall be replaced every 2 years
- **Foot protection:** Every worker employed on construction sites must wear safety boots with steel toe cap.

It is your responsibility to keep PPE in good condition and you must inspect regularly and notify your Foreman if it needs replacing.

Use of PPE applies from the front gate or any entrance on to a construction site. The following areas are excluded from:

- Office/ administration areas.
- Lunchroom.
- Visitor car parks, where there is a clear path to the sign in office areas that does not cross operational vehicle flows or does not pass through hazardous sections of site.

USE OF MOBILE AND MINOR MOBILE SCAFFOLDING

Scaffolding:

- QUALIFIED PERSONS MUST ERECT SCAFFOLDING ABOVE 5 METERS IN HEIGHT.
- Scaffolding over 1 meter in high requires a handrail.
- Never attempt to modify scaffold yourself.
- Make sure toe boards are securely in place and that guard rails are installed, and planks sound and secure.

Adjustable props:

- These are to be used to support framework or carry loads and require a hardened steel pin at the screw adjuster. Ordinary steel will give way at only 1/5 of the load the correct pin is designed to take.
- Tampering with adjustable props may lead to the death of many people, including you!

Swinging Stages:

- Must be checked by the Safety Supervisor before use.
- Only to be used by trained personnel.
- Can only be moved by a certified scaffold of the appropriate class.

Guard Rails:

- Perimeters and openings in floors and walls must be fitted with guardrails or covers.

- If you see one missing or damaged fix it if possible if not, report it promptly. DON'T LEAVE IT FOR SOMEONE ELSE TO ACTION.

WORKING AT HEIGHTS

Work at height should be eliminated, isolated and minimised where possible.

Whenever working at heights is unavoidable isolate all areas where a person could fall, all areas must be identified, physically isolated and communications must be made clear at prestart and briefings. Submit plans and supervise your work. DO NOT PUT YOURSELF AT RISK.

Ask yourself…
- Can the task be done at ground level?
- Can we change the task or use different equipment to achieve this?

Next steps...
- Have we got guardrails or edge protection?
- Are there fully guarded permanent or temporary platforms where a fall could occur?
- Could we use scaffolding or mobile elevated work platforms?
- Do we have screens, solid barriers or barricades?
- Is there a total restraint system where no fall is possible?

If we have no other option…
- Use fall arrest and ancillary equipment
- Industrial rope access systems
- Ladders or step ladders
- Safety nets
- Soft landing systems
- Stills

If there is a chance someone will be exposed to a free fall more than 600 mm and less then 2 meters, a rescue plan needs to be provided for the rapid retrieval of personnel.

Work Safe is to be notified of any work above 5 meters.

WORKING WITH LADDERS

Ladders used wrongly or in bad condition have caused many serious falls. Before using any ladder check for:
- Defective rungs
- Faulty feet.

When using a ladder remember to:
- Stand the ladder on level base
- Set the ladder at the correct angle
- Secure the ladder by lashing at the top and bottom or have someone holding it.
- Ensure the ladder is long enough to do the job.
- Always face the ladder and use both hands when climbing or coming down.
- Don't use a metal ladder near electricity
- Always wear shoes with heels when climbing a ladder.
- Never over reach or reach sideways GET DOWN AND MOVE THE LADDER.

The ladder should project at least 1 meter above any landing place.

The correct angle for a ladder is 1 unit measurement out at the base for every 4 units of height.

Ladders should not be used as work platforms unless a risk assessment indicated that no other alternative is available.

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All erecting, dismantling or alteration of scaffolding over 5 meters high must be carried out by a suitably qualified person. Normally these systems are subject to calculations and engineering design and all dimensions and specifications must be strictly adhered to.
NO SCAFFOLD should be erected closer than 4m to power lines or electrical conductors without approval from the local electricity network company.

- Always remember that you have a duty to work in a safe manner and to ensure the safety of other workers and the public.
- Always work in logical sequence.
- Do not throw materials about. Always consider the safety of others.
- Always lower materials in a proper manner during dismantling.
- Ensure all materials are cleared from the site on completion.
- Complete a daily hazard identification and controls report when on the job.

Before and during erection:
- Examine all materials on arrival at the site, put aside any defective or damaged items. These should be removed from site as soon as possible and not be used to construct the scaffold.
- take any necessary precautions need to ensure the public are not endangered, erecting diversion barriers and signed if needed.
- Special care should be taken when working in close vicinity to overhead or adjacent powerlines. All exposed wires and cables should be treated as live.
- Whenever leaving the scaffold site make sure that materials are not left in unsafe locations i.e. doorways, foot paths. Always store materials in a safe and secure location.
- At the earliest opportunity warning signs such as ‘INCOMPLETE SCAFFOLD’ or ‘UNSAFE SCAFFOLD’ should be displayed. Once scaffold is safe and ready for used ‘SAFE SCAFFOLD’ signs should be displayed at access and egress points.

Whilst scaffold is in use:
It is important to check that the scaffolding:
- Standards are correctly aligned and properly supported at their bases.
- There is no undue deflection in ledgers and transoms or putlogs.
- No essential member of the structure has been removed.
- All ties and braces are in place and are effective in stabilising the structure.
- All couplers are tightened properly.
- L scaffold planks are sound and properly supported.
- All guardrails and toe boards are secured in place.
- All ladders are in good condition, properly secured and supported.

Before and during dismantling:
- Examine and check the scaffold to ensure that all ties and bracing are effectively in position and that the scaffold is in a stable condition. If partial dismantling is being undertaken ensure remaining scaffold is fully safe and stable.
- Ensure suitable warning signs are in place.
- Dismantling should be carried out progressively from the top level downwards. Ties, braces, ledgers, transoms, planks and guardrails must be removed lift by lift with standards following as joint positions are reached.
- Where a building or structure is being demolished the scaffold should be dismantled to ensure that no more than 4m remains standing above the vertical tie points at any time.
- Care should be taken to avoid any mishandling of materials, all of which should be lowered regularly and not ‘bombed’ during the dismantle.
- Small amounts of material may be temporarily placed on lower lifts for convenience during dismantling but care should be taken to ensure that it does not build up to an unacceptable load. Where such temporary placement at low levels is carried out, it may be necessary to place raking tubes rom the ground level to the lower lift in order to stabilise the scaffold.
- During dismantling ensure that all scaffolding materials are removed from the building and that no loose material are left on roofs, or projecting cornices etc.

CONSEQUENCES

- A failure to meet any single (or any multiple) part/s of these procedures is considered a matter of serious misconduct, which may result in disciplinary action up to an including summary dismissal (termination of employment without notice).

AMENDMENTS

- Mega Structures reserves the right to amend this policy to suit business needs at any time.

ACCEPTANCE

I confirm I have read and understand the above policy.

Employee Name: _____

Employee Signature: _____

Date of issue: _____ / _____ / _____