caledonia	Issue Date:20/05/19
PM-038 Scaffolding Procedure	**Authorised By: Jim Cunningham**

Aim:

This Scaffolding Procedure is to ensure a safe system of work that protects people from any potential hazards associated with the erection and installation, working from and dismantling of scaffolding. This is a supporting Procedure to the Caledonia Health and Safety Management Plan and forms part of the overall Safety Management System.

Scope:

To describe the requirements for erecting/dismantling/modifying scaffold and controlling risks associated with this operation. This procedure applies to all Caledonia sites.

Responsibility:

Managers, Supervisors and Persons in Control of workplaces

a) Ensure a risk assessment is completed prior to commencing any scaffold work;

b) Ensure personnel maintain compliance with the requirements of the risk assessment;

c) Only experienced competent personnel conduct risk assessments, select appropriate control measures, erect and dismantle, and inspect scaffold.

d) Ensure correct Personal Protective Equipment (PPE), including all fall protection equipment, is provided and personnel are trained and competent in its use; and

e) Ensure information, instruction, training and supervision of all personnel is provided to enable them to perform their work in such a manner that they are not exposed to the hazards of falling from height or falling objects.

f) There is a safe system in place for managing Working at Heights, and that the system fully complies with Caledonia Working at Heights procedure, and any relevant Australian Standards.

g) Personnel are not exposed to hazards arising from working at heights or falling objects.

h) Personnel do not work alone in a fall-arrest situation

Scaffold Designers and Planners

Planners/Schedulers/Work Coordinators shall ensure that the requirements of the Working at Heights Standard and this procedure are followed during the scoping and planning of work. All scaffold shall be designed to the applicable Australian/New Zealand standards, AS/NZS 4576.5 and AS/NZS 1576, parts 1 to 6.

Scaffolding Personnel

a) Participate in producing a written risk assessment, with the risk assessment signed by all personnel involved in the activity;

b) Undertake all activities in accordance with the risk assessment and regulatory requirements;

c) Inspect all PPE and fall protection equipment prior to use for damage;

d) Use appropriate PPE, including correct fall protection equipment as necessary to prevent personal injury; and

e) Conduct area pre-inspections, and ensure the location is free from rubbish and materials not required for immediate use.

All Other Persons

All persons involved in erecting, dismantling, or using scaffolding, shall undertake a SWMS/JHA specific to the task. Should conditions or the scope of work change, the SWMS/JHA shall be reviewed and amended as required.

Hazard and Risk Assessment

The risk assessment shall be conducted by the scaffolding crew members and be appropriately reviewed and signed by the Supervisor or Team Leader prior to carrying out scaffold erection.

Where a scaffold has a high degree of difficulty, or the scaffolding crew members are unsure of the most appropriate methods to reduce risk to an acceptable level, further consultation must occur with the Operations Manager/Site Manager/Supervisor and Design Team.

Requirements for End Users

The WHS Regulations, AS/NZS 1576 parts 1 to 6, AS/NZS 4576 and AS 1891.4 shall be consulted at all times to determine the requirements for scaffolding.

In order to satisfy the requirement of personnel intending to work from the working platform, the scaffolder will need to liaise with those personnel. The maximum load likely to be placed on the working platform, the area of working platform necessary to carry out the work, positioning of access ladders and a comfortable working height for the working platform will all need to be discussed and requirements determined.

Any hazards involved with the erection shall be identified at the planning stage and appropriate precautions taken.

Proximity to live electrical equipment or interface problems with special consideration to accessibility to firefighting equipment, emergency exits and critical equipment may need to be considered.

General Design

Design Principles

The design of the scaffold should take into account:

- The strength, stability and rigidity of the supporting structure;
- The intended use and application of the scaffold;
- The safety of persons engaged in the erection, alteration and dismantling of the scaffold;
- The safety of persons using the scaffold.;
- The safety of persons in the vicinity of the scaffold and
- Basics of Design

The design of the structural members and components of a scaffold shall comply with AS/NZS 1576 (Parts 1 to 6).

Foundations

Scaffolding foundations must be able to carry and distribute all the weight of the scaffold, including any extra loads, for example perimeter containment screens, placed on the scaffold.

Consideration should be given to the following when designing the foundation of the scaffolding:

Ground Conditions

Ensure that ground conditions are stable and scaffolders are aware of any factors which may affect ground stability before the scaffold is erected.

Water and nearby excavations may lead to soil subsidence and the collapse of scaffold. Any likely watercourse, such as a recently filled trench, which has the potential to create a wash out under the scaffold base, should be diverted away from the scaffold using appropriate controls.

Loadings

Scaffolding needs to be designed for the most adverse combination of dead, live and environmental loads that can reasonably be expected during the period that the scaffold is in use.

The dead, live and environmental loads will need to be calculated during the design stage to ensure the supporting structure and the lower standards are capable of supporting the loads. The design of such scaffolds and ties must be approved by a competent person or an engineer.

Follow the specifications of the manufacturer, designer or supplier for the maximum loads of the scaffold.

Supporting Structure

The supporting structure must be capable of bearing the most adverse combination of loads possible during the use of the scaffold. Obtain advice from an engineer before erecting scaffolds on verandas, suspended flooring systems, compacted soil, parapets and awnings.

Propping may be required where the supporting structure is not capable of bearing the most adverse combination of loads.

Stability

Scaffold stability may be achieved by:

- Tying the scaffold to a supporting structure;
- Guying to a supporting structure;
- Increasing the dead load by securely attaching counterweights near the base and
- Adding bays to increase the base dimension.

Tying

Tie methods and spacing need to be in accordance with the instructions of the manufacturer, designer or supplier.

Working Platforms

Each scaffold shall be designed to carry the required number of working platforms and to support any live loads. All erection, dismantling and modification shall be undertaken from a working platform where practicable. In addition to this, work platforms shall

- Have a slip-resistant surface;
- Not be cracked or split;
- Be of uniform thickness;
- Be positioned so no single gap between planks exceeds 10mm;
- Be positioned to prevent uplift or displacement during normal use and
- Not be lapped on straight runs of modular and tube and coupler scaffolding

Lapped in fill material in compliance with AS /NZS 4576 (e.g. 17mm plywood) may be used to cover gaps at returns (around corners) of scaffold bay

Scaffolding Compliance Standards

It is the responsibility of the scaffolder to ensure that all scaffolding work is carried out in a safe and efficient manner, adhering to state regulations and approved Australian standards; or in the absence of appropriate regulations, to sound established customs and practices and the requirements of this safe work standard.

All scaffolds and patented access systems shall comply with the following:

a) Be designed to the applicable Australian/New Zealand standards;

b) Be erected or dismantled in accordance with the relevant requirements of AS/NZS 1576 parts 1 to 6, modified and maintained by persons who are holders of a State or interstate High Risk licence to carry out scaffolding work;

c) All scaffolds shall be inspected and tagged (scafftag) by a licenced and competent person;

d) All scaffolds shall be entered into a scaffolding register;

e) **In Australia** scaffold inspections shall be conducted at a minimum of every (30) days for all scaffolds (or as per client requirements), and records of the inspections maintained (or as per client requirements);

In **New Zealand** scaffold inspections shall be conducted daily in the case of a suspended scaffold, or weekly (7days) in the case of other scaffolds, while the scaffold is in use. If the scaffold is not in use, monthly inspections are required.

f) All scaffolds shall be re-inspected by a licenced and competent person following any weather conditions (high winds, heavy rain) that may impact on the scaffolding with alterations and repairs made where necessary;

g) All scaffolds shall be clearly marked with the structures load capacity (scafftag); and

h) All scaffolds shall be provided with edge protection that consist of (all dimensions above the walking level) of at least;

i) A top rail between 900 and 1100mm, a mid-rail at 600mm, and a 150mm (minimum) kickboard; or

j) A top rail at a minimum of 900mm and infill mesh panels to prevent tools or equipment from falling

Verification of Competency

Scaffolders shall provide evidence of their competency in one or more of the three levels displayed in Figure 1.

In addition to the above a Contractor who is undertaking scaffolding work as part of their scope of work shall provide verification to Caledonia that every scaffolder has completed a verification of competency assessment.

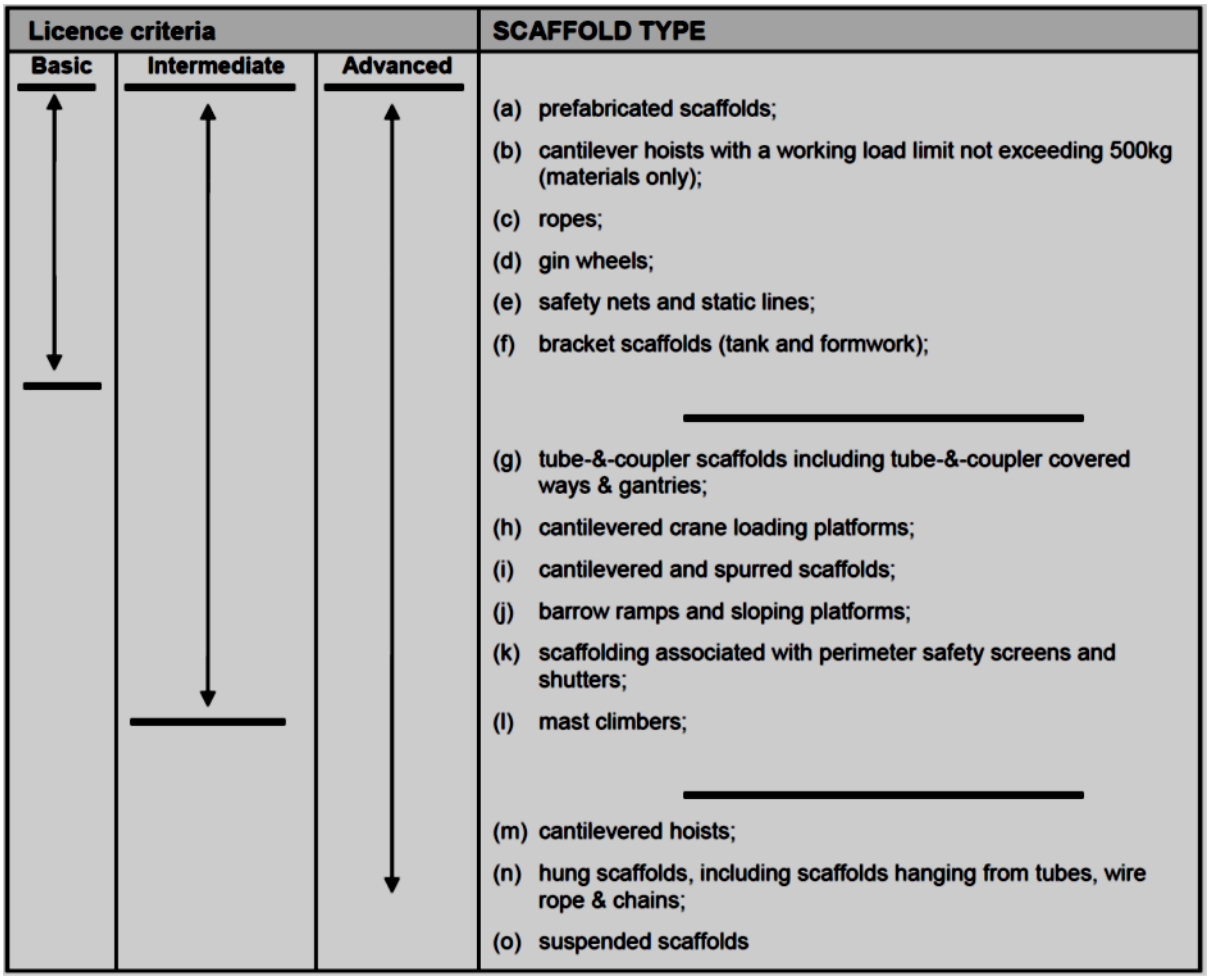

Figure 1 – Scaffolding Certification Levels

Preferred Method of Construction

Where practicable, the scaffold shall be built in a manner that prevents the risk of falling at all times, thereby eliminating the need for the scaffolder to be attached to a restraint or arrest anchorage point.

To achieve this during construction, the scaffold shall be fully enclosed at one metre lifts, with permanent decks every 2 metres. Temporary decks (consisting of three planks) may be used for construction purposes at the one metre lifts.

Each deck shall be installed from below, while standing on either the ground or a deck enclosed by rail protection. Before erecting the new deck, the next level of standards and hand rails shall be installed by the scaffolder who will be in a safe position one metre above the existing deck.

For single bay scaffolds and internal access bays, the permanent deck shall remain in position every 2 metres. One plank may be left out of this deck to allow for equipment to be passed through to the next level. All enclosed lifts are to be left enclosed until the scaffold is stripped. Prior to approving the scaffold for use, all access decks shall have the final plank installed.

For multiple bay scaffolds, the technique is the same except that planks may be retrieved from below a completed deck provided the scaffolder remains in a protected position on a deck at the adjoining bay. This also requires an internal handrail to be installed, separating the bays.

All internal access bays shall be enclosed at each 0.5 metre lift for edge protection.

By following this above requirement, the scaffolder will at all times be working within handrails and on a deck and will not need to be attached to a restraint or anchorage point. If however rail and deck protection cannot be constructed as described above, the scaffolder shall be attached to a suitable restraint or arrest anchorage point.

Stair access bays shall be built in the same manner as a bay without ladder or stair access and then have the decks removed by working from the top down to the bottom, leaving an individual at the top to lift and install the stair sections. This allows for the stair components to be lifted up through the centre of the bay. The stair access shall be installed starting from the top and working down, using restraint from the adjoining bay to eliminate the potential of a fall.

While the risk of equipment falling during the construction of a scaffold exists, the area below shall be barricaded off to prevent any pedestrian being struck by tools or equipment that could potentially fall.

Scaffolders involved in the construction of the scaffold shall remain in a safe position at all times, where the risk of being struck by falling equipment is minimised.

Pedestrians and all other persons must be protected from the potential of falling equipment at all times. This may require the construction of safety nets or hoardings prior to working above the area.

Erection and Dismantle Sequence

The scaffolding supervisor/team leader shall be responsible for ensuring that the sequence or erection complies with the requirements of the WHS Legislation, AS/NZS 1576, AS/NZS 4576 and AS/NZS 1891.

The scaffolding crew shall lift and lower all gear and equipment in a safe manner using ropes, gin wheels, baskets etc. The throwing of gear or dropping of anything from an elevated area is not permitted and persons found to be undertaking such dangerous activities may be subject to disciplinary action.

Scaffolders shall use approved means of access during the construction of scaffolding. Internal access should be completed at each 2-metre lift or as required to ensure safe access during construction.

Scaffold clips and tubes protruding on access ways and working platforms shall be fitted with “Scaff-guard caps”. Other protection devices may be used to prevent injury to personnel where “Scaff-guard caps” are not available.

“Access by means of climbing the scaffold externally by using the standards as foot holds is not permitted”.

During erection, scaffolders shall use as a minimum three planks to stand on, but as a general rule the following is required where practicable:

a) For 1200mm decks, 3 planks shall be used;

b) For 1800mm decks, 5 planks shall be used; and

c) For 2400mm decks, 8 planks shall be used.

Scaffold Inspection and Scafftags

All scaffolding components shall be inspected by a competent person prior to scaffold erection.

Scaffolding components shall be used only for the purpose for which it was intended.

- All scaffold prior to use must have a pre use visual inspection of components (for example not limited to Ladder, handrails, footings, toe boards);
- In Australia Scaffolds shall be inspected and tagged by a competent licensed scaffolder prior to initial use and at 30 day intervals (or as per client requirements) and records of the inspections maintained
- In New Zealand scaffold inspections shall be conducted daily in the case of a suspended scaffold, or weekly (7days) in the case of other scaffolds, while the scaffold is in use. If the scaffold is not in use, monthly inspections are required.

- Scaffolds shall not be used if inspection tags are missing or removed or when inspection tags have not been updated within the period specified.

All scaffolds and its supporting structure must be inspected immediately by a competent person:

- If adverse weather has occurred and the structural stability of the scaffold or its supporting structure creates a risk to health or safety
- before the scaffold is used after an incident has occurred that might affect the stability of the scaffold or its supporting structure creates a risk to health or safety

Stage 1

Where a scaffold or suspended stage is being erected, a scafftag shall be attached in clear view near the ladder or access point (in this uncommissioned state, the scafftag shall show the red international symbol for "no entry" and the words "do not use scaffold" applying to all workers not involved in the process of building the scaffold or suspended stage).

Stage 2

a) Once the scaffold or suspended stage is completed and commissioned for use, a green scafftag is filled out with the following;

b) The date that the scaffolding was erected, altered or repaired, as the case may be;

c) The name and signature of the person doing the inspection;

d) Whether the scaffold is to be used for – light duty, medium duty or heavy duty;

e) The scaffold is to be tagged in a prominent position at every access to the scaffold to indicate a fully commissioned scaffold/suspended stage;

f) A duplicate scafftag shall be completed and held in the supervisor's office until the scaffold/suspended stage is dismantled;

g) A scaffold register shall be maintained that records all the scafftag insert information;

h) Where a scaffold/suspended stage is to be dismantled, the duplicate tag is taken by the scaffolder to complete the decommissioning; and

i) The green scafftag(s) inserts are then returned to the supervisor, to inform him that the scaffold/suspended stage has been dismantled.

Stage 3

Where the scaffold/suspended stage is damaged or becomes faulty, or is unsafe in any way, the green scafftag is to be removed and replaced with a yellow scafftag, indicating the scaffold is not safe for use.

The duplicate insert held in the supervisor's office shall be completed the same way. This will enable the supervisor to make arrangements for the scaffold/suspended stage to be repaired or dismantled.

Personal Protective Equipment

The minimum general P.P.E requirements to be worn by scaffolders shall consist of the following:

a) Safety Harness with double inertia reels and or restraint equipment;

b) Safety helmet with chin strap attached to the helmet (chin strap to be used where there is a risk of the helmet falling off);

c) Close Fit Safety Glasses or Mono Goggles;

d) Steel capped safety footwear;

e) Long trousers and a shirt with long sleeves rolled down; and

f) Heavy duty company issued gloves (Cut 5 minimum) at all times when handling scaffolding components.

Safety Harnesses

At all times when scaffolders are climbing or working aloft a safety harness shall be worn. The safety harness shall be correctly fitted.

All persons who are required to use safety harnesses, lanyards, restraint systems and arrest systems shall be trained in the proper use of those systems and specific equipment.

Unless the scaffolder is in a position where there is no risk of a fall, the scaffolder shall at all times be either attached to a fall restraint point, or a fall arrest point.

Note: that fall restraint is preferred to fall arrest in all circumstances.

For fall restraint (where a fall is not possible), the anchorage point must be capable of supporting a load of 6 kN, (600 kg).

For limited fall arrest (where a limited free fall of no more than 600mm is possible), the anchorage point must be capable of supporting a load of 12 kN, (1.2 Tonnes).

For full fall arrest, (any situation where it is possible to free fall more than 600mm, but less than 2 metres) the anchorage point must be capable of supporting a load of 15KN, (1.5 tonnes for one person) 21 KN (2.1 tonnes for two persons).

Refer to Layher Technical Data sheet All round Attachment Points for Fall Arrest and its application, when working at heights, erecting Layher scaffold.

Failure to follow the above requirements for safety harnesses shall be considered as a serious breach of Caledonia's safety requirements and persons not complying with these requirements may be subject to disciplinary action and Caledonia's Code of Conduct, Values and Behaviours Policy.

Dismantling Scaffold

Dismantling scaffolds is to be a reverse of the erection sequence and the same fall protection requirements apply;

Scaffolds shall be disassembled progressively with the dismantled items being safely carried or lowered to the ground;

Under no circumstances shall any item be thrown or dropped from the scaffold;

a) Access to the area where the scaffold is being disassembled shall be barricaded and warning signs posted;

b) Dismantled items shall be stacked neatly so as not to create a tripping hazard;

Where practicable, the dismantling of scaffolding is to be carried out using a sequential method that provides fall prevention for team members.

Because of the potentially hazardous nature of scaffold removal, it is important that proper attention is given to scaffold dismantling activities. Controls measures will be documented in the SWMS and JHA. The SWMS and JHA will address safe work practice for dismantling scaffolds

Gin Wheels

The following minimum requirements shall be used when installing and using non-powered or non-mechanically advantage lifting aids.

- Loads raised or lowered by Lifting Aids shall not exceed the WLL of the Lifting Aid;
- The lifting medium used on non-powered or non-mechanically advantaged Lifting Aids shall be compatible with the Lifting Aid i.e. Free Rotating Gin wheels and Ratchet type Safety Pulleys, where fibre rope is used shall be a minimum of 16mm in diameter and a

maximum of 18mm;

- The maximum load that can be lifted with natural fibre rope when using non-powered or non-mechanically advantaged Lifting Aids is 30kg;
- The rope shall be joined in a continuous loop using a double sheet bend (or similar) forming a tail for attaching the load. Splicing a tail into a continuous loop of rope can be done, however the rope tail shall be of equal diameter;
- An exclusion zone shall be erected using hard barricade around the base of the lifting aid with signage attached identifying the operation. The exclusion zone shall be appropriate to the height and material being lifted;
- Lifting Aids can only be erected, modified or dismantled by the appropriate level of scaffolder, and operated/controlled by an authorized competent person;
- Scaffolds Supporting non-powered or non-mechanically advantaged Lifting Aids shall comply with the load performance requirements of AS/NZS 1576 (Parts 1 to 6) and be constructed in accordance to AS/NZS 4576;
- Synthetic fibre rope is not to be used on non-powered or non-mechanically advantaged Lifting Aids
- Use of mechanical aids to get scaffold components to the job front should be risk assessed as part of the JHA process and shall include things such as high winds and their associated hazards and controls.

Hoarding

Where work is carried out in the vicinity of pedestrian or vehicular access, adequate protection (such as hoarding) must be used to minimise the risk to the public, and area lost to public access.

All materials shall be properly fixed, lapped and jointed, the timbers must be fixed to the scaffolding by appropriate scaffold clips and the structural adequacy of the Hoarding is to be certified by a registered Professional Engineer that may be subject to wind loading.

Modifications and change in design of scaffolding that hoarding is attached must be approved by a registered Professional Engineer.

Hoarding and associated materials i.e. scaffold clips, timbers are to be inspected following an occurrence that could have affected the stability or adequacy of the scaffold such as

- damage sustained from construction/demolition activities
- severe storm conditions or other adverse weather conditions

Prevention of Dropped Objects

Supervisors shall ensure that all tasks interfacing and/or conducted at height are reviewed and analyzed to identify any and all potential risk of exposure to dropped objects.

Scaffolding tools, components, materials, and debris shall not be allowed to accumulate in any quantities on scaffolds, access ways, or overhead protection.

All scaffolding tools or other spanners used during erection, modification, or dismantling shall be fitted with a safety lanyard and attached to the scaffolder to prevent falling from one level to another to.

As a minimum; the following should be considered when evaluating the risk of dropped objects;

- Falling / Dropped Objects, (bumped, dropped, slipped & thrown); use of gin wheels or other mechanical aids are to be used to get scaffold material to work front. Anyone seen to be deliberately throwing or dropping material will face disciplinary action;

- Open penetrations, gaps and spaces (gaps between handrails and structures, open space between handrail and floor, gaps between pipes and grid-mesh;
- Deflection potential for falling objects is to be planned into dropped object protection:
- Ensure that items are secured when personnel are working at heights;
- Positive communication must be made between personnel when passing scaffolding components;

Barricading and Signage

Hard barricading (exclusion zone) shall be placed around the scaffold erection areas prior to the scaffold being erected. The exclusion zone must take into consideration deflection of any potential for dropped objects.

Signage which states “Danger Do Not Enter”, “Men Working Above”, or “Scaffold under Construction”, shall be placed on all faces of the hard barricading where personnel may potentially enter. Information Tags alone are not sufficient.

Barricading consisting of a minimum of Danger tape can be used, but a risk assessment requires to be carried out if the use of hard barricading is not practicable. Information tags should be attached to the barricading stating date, contact details and reason for barricading.

If Barrier fencing is to be used it shall be erected on solid stable supports and maintained by the scaffolding crew until such time as the scaffold is complete, whereupon the scaffolding crew shall dismantle the barrier fencing, and neatly stack the components in a safe manner in an approved location (i.e. not in the middle of an access way).

Ladder Access

a) All ladder access shall be internal and intermediate, not exceeding 2 metres i.e. there should be a landing or reversal platform at each 2-metre lift (wherever practicable);

b) Where the only option is an external access exceeding 2 metres, a secondary means of fall protection shall be used, e.g. side rail on the ladder, or fall arrester attached to the top of the staging, secured in an approved manner;

c) Openings in edge protection at points of access to stairways or ladders shall be adequately protected with gates or shall be sufficiently distant from working platforms to prevent persons working on such platforms from inadvertently falling through the opening. Gates shall be self-closing and shall not open away from the platform;

d) No ladder shall exceed 6 metres;

e) No extension ladders are to be used; and

f) Where any scaffold cannot be built to meet the above requirements for ladder access a detailed risk assessment shall be undertaken to determine the acceptable and most appropriate means of construction. The risk assessment is subject to approval by a Safety Advisor or other authorised person prior to erection.

Working Over water or other Liquids

Where personnel are erecting scaffold and working in a position where there is a possibility of a fall into water, they must use the hierarchy of control to minimise the risk. If they identify the wearing of working with heights personal protection equipment as the only practical method of controlling the risk, they must choose working with heights systems that are in line with working with heights training, Australian standards and Company, Client requirements/procedures and where a suitable overhead anchor exists the use of this in conjunction with a retractable lanyard.

All scaffolding erected over or a water body or other liquids requires, a specific risk assessment a (SWMS) shall be developed to identify controls needed before work can commence.

For all scaffolding conducted above water (or where personnel have the potential to fall into water or other liquids while working at heights) personnel must wear a full body harness complete with a personal flotation device (either flotation harness or separate PFD). All equipment must be compliant with the relevant Australian Standards

Careful consideration should be given to the wearing of an integrated type personal floatation device with Harness which are compact and lightweight and elevate restrictions in body movement during erecting of scaffolding.

When working over a water body or another liquid, the anchor point shall be independent of the entire scaffold system.

Where a suitable overhead separate working at heights anchor exists (or can be built) this should be the preferred method. No scaffold should be used as the anchor point when working over water in event of the structural collapse of that scaffold.

Other Considerations when Working Over water (Floatation Devices)

- A minimum of three personnel within sight and sound of each other must be used where there is a risk of personnel falling into water
- A life ring should be available not more than 25 metres from the work location

Note: The wearing of only a personal floatation device when working over water should be adequately risk assessed to determine

- Fall height to water
- Structures underneath the scaffolding which is being erected
- Availability of rescue craft for retrieval of person in event of fall into water

Engineer Designed Scaffolds

As a minimum the following standards shall require a certified engineer's approval of the design before construction:

- Free Standing Tower Scaffolds – where the height exceeds three (3) times its base width and guy ropes are used
- Spur, Cantilevered and Hung Scaffolds that are outside parameters of manufactures design recommendations for that system
- Suspended scaffold – includes any structure supported from needles and includes boatswain's chair.
- Scaffolding has sheeting attached.
- Scaffolding outside of manufacturer's design specifications.
- Scaffolding is above 33m in height.

- Scaffolding has multiple working platforms below 33m.
- Scaffolding has foundation issues.
- Scaffolding for the attachment of lifting tackle.
- Mast climbing platform.

Note: Design of Cantilever/Hanging scaffold over water

The MPA of concrete structures that scaffolds may be anchored to, is to be tested prior to design so that safety in design is considered.

When designing cantilever / hanging scaffold over water first preference should be given to using counterweight over bolting to concrete structure.

If counterweight option is not viable and bolting is to be used 14mm anchor bolts are to be used as a minimum.

Stacking/ Storing

As a minimum storage of scaffolding shall require:

a) All scaffolding components shall be stacked in stillage's, on dunnage or in the case of clips in drums and located as close as possible to the erection site;

b) Barricading, in shall be placed around all scaffolding storage areas;

c) Signage shall be placed at the access point that states "Keep Out, Authorised Personnel Only";

d) Scaffolding crew are responsible for maintaining good house-keeping practices in scaffold storage areas; and

e) Scaffolding equipment shall not be stacked or stored in access ways, in front of safety showers, at the base of stairs or ladders or stacked on handrails.

Defective Components

All scaffolding components shall be inspected by a competent person prior to scaffold erection. Any components found to be defective shall be tagged 'Out of Service.' Under no circumstances shall defective or substandard scaffolding components be used. Defective components are to quarantined and returned to supplier.

Cutting of Scaffolding Tubes

Where scaffold tubes are required to be cut, they shall be cut by means of drop saws or other abrasive cutting mediums. The cutting of tubes by the use of flame cutting (oxy/acetylene) is not permitted.

All tubes cut to size on site for specific scaffold requirements shall be de-burred immediately once cut. Failure to de-burr a cut tube creates a serious risk of injury to a fellow scaffolder.

Scaffolders finding tubes with burrs, or sharp sections shall make the item safe for use

Storage of Materials (Onsite and Yards)

Scaffolding components shall be stored in a neat and tidy manner within a designated lay down or storage area.

- Storage areas must not obstruct access ways, stairways and ladder accesses

- Laydown areas should be designed and maintained so that forklifts, Telehandlers and trucks can be operated safely
- Scaffold transoms, standards and other length components shall not be stored vertically unless in an approved storage facility designed to accommodate vertical storage of such components.
- The location and method for storing scaffold components on-site should be subject to a risk assessment having regard to the protection of the integrity of scaffold material (for future use) and ensuring the safety of those working in and around areas where scaffolding components may be stored.
- Defective materials are stored in a clearly segregated area away from all other scaffolding.
- All scaffolding and scaffold components must be secured during severe weather events

Transport of Scaffold Material

The loading and unloading and transport of scaffold materials, has a number of inherent HSE risks that if not identified and controlled have the potential to cause serious injury or damage. It is essential that the controls are based on the Hierarchy of Controls and risks are reduced to ALARP.

All material being transported shall be packed, located and restrained in a way that allows safe loading and unloading, including consideration of multiple deliveries and sequences.

All persons involved in the loading/unloading and transport of material must ensure:

- Vehicles are loaded such that they can be unloaded safely and that risk is minimised so far as is reasonably practicable.
- Vehicles are not loaded if not fit for purpose.
- Vehicles are not loaded without their mass and dimension information being known.
- Loads do not exceed vehicle mass or dimension limits, do not cause the vehicle to exceed mass limits, and are placed and secured in a way that will not allow them to become unstable, move or fall from a vehicle.
- Drivers are provided with reliable weight information before commencing a journey.
- Loads are secured and restrained and remain so for the duration of the journey.
- Load restraint devices, dunnage and other equipment and supports are fit for purpose and regularly inspected.

Materials must be placed in appropriate stillages, bins and be appropriately unitised.

- Scaffold steel tubes, standards, ledgers and braces are to be strapped in stillages using 19mm steel strap and wrapped (stretch wrapping)
- Scaffold tubes under 1.2 m in length must be placed in a bin and appropriately wrapped (stretch wrapping)
- Hop ups are to be strapped with 19mm steel strapping and be wrapped, sole boards must be strapped with 19mm steel strap, with scaffold jacks being appropriately wrapped for transport.
- All cages carrying scaffold fittings are to be wrapped (top and underneath) and restrained appropriately.

- Layher spigots being transported are to be only transported with Nylon locking nuts and in appropriate scaffold bin with wrapping (stretch wrapping).