



Couple of takeaways

- While eliminating working at height risks and designing permanent work platforms should always be considered first, scaffolding can be a safe alternative to other height access methods. Once erected, it may be considered a safer alternative than elevated work platforms, ladders and fall restraint systems. Scaffold can provide a sturdy work platform which can eliminate many working at height risks.
- Where appropriate, permanent platforms should be considered through the safety in design process.
- While properly designed and erected scaffold can reduce work at heights risks for people working from the scaffold, erecting the scaffold may be a high risk activity and requires trained and competent persons.



What is this procedure for?

This procedure outlines the processes and standards to be used across the Hydro Group to manage the risks associated with scaffolding and scaffolding work. It outlines the processes and standards to be adopted to reduce the risk associated with scaffolding work across the Hydro Group.



How do we plan for scaffolding work?

The first step in planning to erect scaffolding is to understand the risks associated with the task and identify whether scaffolding is the most appropriate and safest method of doing the job. The **Job Manager** should consult with workers, engineers, scaffolding designers or scaffolding contractors to gain advice on the best scaffold and design solution for the job. Factors to be considered include:

- Ground conditions
- Mobile plant or other nearby hazards and risks
- Space available
- Nearby or overhead equipment (electrical or other)
- Load or work requirements of a platform
- Scope / type of tasks required to be performed from the scaffold.

A scaffold plan is required for all complex scaffold designs. This includes those from which a fall distance of greater than 2 metres exists or with more than 1 working bay or where some other significant risk is present (water, electricity, ground conditions, interactions with nearby high risk activities etc.).

Scaffold plans are to be prepared by **the organisation erecting the scaffold** and by a person holding the relevant scaffolding high risk work license (see “What training is required?”). Plans are to be submitted to the **Job Manager** and remain available for inspection on site.

A scaffold plan is not required for simple scaffolds and where no other significant risks are present (water, electricity, ground conditions, interactions with nearby high risk activities etc.). However, these must have a work instruction or manufacturer’s instructions with diagrams available and reasonable controls in place to manage the risk of falls. Simple scaffolds are defined as presenting a fall risk of 2 meters or less and include the following:

- Prefabricated mobile scaffolds
- Trestle scaffolds
- Scaffolds with only 1 working bay.

Further guidance can be found in Appendix A.



What information is included in a scaffold plan?

The scaffold plan should include a site layout and detail the elevations and sections of scaffold. In consultation with people involved (e.g. designers, installer, workers) the plan will provide the following information:

- The duty classification of the scaffold, including maximum platform capacity
- Foundations and weight bearing capacity
- The maximum number of working platforms
- The maximum height of the scaffold
- Live and environmental loads
- Where components from different suppliers or manufacturers will be used
- Location of bracing, scaffold ties and/or anchor points for fall prevention
- Access, egress and edge protection
- Scaffold stability and protection from falling objects (incl. containment sheeting)
- Details of the rescue system designed into the build
- How other significant risks (water, electricity, ground conditions etc.) have been controlled.



What minimum standards are required for simple scaffolding work?

- A high risk work license is not required for simple scaffolds provided no other significant risks are present. However, a work instruction or manufacturer's instruction with diagrams must be available.
- Simple scaffolds must be built to manufacturer specifications.
- An information tag must be attached to the scaffold upon completion which details:
 - Name of the person who built the scaffold
 - Date the scaffold was built

- Load limits or other restrictions on the use of the scaffold

- A Scaffold inspection Tag is not required for simple scaffolds.
- Workers building or working from a simple scaffold must ensure fall from height risks are controlled.
- A workplace inspection for scaffolding is available as a guide for Job Managers or other persons to conduct a basic safety check of all scaffolding.



What minimum standards are required for complex scaffolding work?

Once a scaffold plan has been received and agreed to by the **Job Manager**, the scaffolding may be erected on site. Scaffolding must be erected and built to the relevant Australian Standards and Codes of Practice. The following points highlight some of these requirements and may include site specific requirements that are over and above these standards:

Scaffold Licensing Requirements

- All complex scaffold designs must be built by a person holding a relevant scaffolding high risk work license (see "What training is required?").

Administrative requirements

- All complex scaffolds require a Safe Work Method Statement (SWMS) for building, dismantling and modifications.
- Emergency plans covering emergency response, evacuation, medical treatment and communication with emergency services.
- CAUTION Do Not Use or equivalent tag to be displayed at all scaffold access points whilst scaffold is being built or dismantled. Tag is to remain in place until scaffold is fully dismantled or inspected and determined safe to use.

- Scaffold inspections are to be completed by a licensed scaffolder prior to its first use, following any alteration and at intervals of no greater than 30 days in accordance with their licensing requirements.
- Scaffold inspections are to be completed on the Hydro Group Scaffold Inspection Checklist to ensure site specific requirements have been met. These may be used in addition to the Licensed Scaffolders own checklists and forms.
- All scaffolding equipment used on site must be design registered.
- All in service scaffold is to have a Scaffold Inspection Tag (e.g Scaffoldtag or equivalent) placed on the scaffold at every access point.

Equipment Requirements

- Components from different manufacturers or suppliers are not to be used together unless detailed in the scaffold plan and their use will not adversely impact the integrity of the structure or the requirements of the design.
- Licensed scaffolders are responsible for ensuring that all Scaffold components used on site are in a good serviceable condition will not adversely impact on the integrity of the structure or the requirements of the design.

Work Method Requirements

- Scaffolders are to only work from fully decked platforms.
- Where scaffolders must work from an incomplete deck, it must contain a minimum of 2 planks with a fully decked platform no greater than 2 metres beneath them.
- Scaffolders should work using 1 metre lifts.
- Means of access to the scaffold should be provided from the start of erection, progressed with the scaffold and used by the scaffolders at all times.
- Guardrails or other height safety controls must be implemented as soon as a fall risk is present.

- Whilst erecting scaffold, scaffolders are to remain behind guard rails or other barriers for fall protection. Where not possible or practical, a suitable fall protection system must be in place.

Build Standard requirements

- Hydro Group build standards are outlined in the Scaffold Inspection Checklist.
- Build standards are to be verified by the **licensed scaffolder** using the Hydro Group Scaffold Inspection Checklist. This checklist may be used in addition to the Licensed Scaffolders own checklists and forms.
- All scaffold builds are to maintain good housekeeping at all stages of the build.

Earthing and Electricity

- All minimum clearances and safe approach distances to overhead power lines and other electrical infrastructure must be adhered to. AS/NZS 4576: Guidelines for scaffolding, provides relevant approach distances for scaffolding. **The Asset Owner** should be consulted where further information or clarification is required.
- Isolation of electrical equipment to eliminate electrical hazards should always be considered as the primary source of control prior to erecting scaffold near electrical infrastructure
- All scaffolding built on, in or around any asset related to transmission, distribution and generation must have temporary earthing fitted by an **electrical operator**.
- Temporary earths must remain in place until the scaffolding is dismantled.
- Within switchyards, other equipment (e.g. scaffold stillages) must be assessed for the need for temporary earthing in consultation with the **Asset Owner**.
- Consult with the **asset owner** to assist in identification of other electrical hazards during the planning phase.

Emergency and Rescue

- All multi-level scaffold to have a rescue system designed into the build. This may include stretcher stairs or the ability for hoisting and lowering a rescue stretcher. This should preferably allow for a single vertical lift.
- A rescue plan must be developed for all complex scaffolds and workers trained in them.
- If assisting an injured person or providing medical first aid, minor modifications which do not interfere with the integrity of the scaffolding structure or expose persons to further risk may be made without a **licensed scaffolder's** approval.



What height safety equipment is required?

Scaffolders must remain behind guard rails or other barriers for fall protection. Where not possible, other fall protection measures must be in place (e.g. harness and lanyard attached to suitable anchorage point).

Examples of situations where a fall arrest/prevention system should **not** be used and other fall prevention methods prioritised (e.g. handrails) include:

- It is possible for scaffolders to hit an object prior to their fall being arrested.
- Its use would restrict the scaffolder's free movement so as to increase the risk of sprain or strain injuries.
- Its use would present a risk of scaffold components becoming entangled or unbalanced during handling.
- There is no adequate and correctly positioned anchorage for restraint lanyards or arrest mechanisms (e.g. inertia reels).

A harness shall be used with a fall arrest system and backed up by a rescue system:

- On hung scaffolds, where the scaffold is constructed from top to bottom and there is nothing for the scaffolder to strike below in the event of a fall.

- On cantilevered needles (for the erection of the first lift and later for dismantling that lift) and for decking between the needles.
- When attaching and removing spurs that project from the supporting scaffold or supporting structure.
- If the scaffolder needs to be suspended or work in a position where the system is fully supporting the worker while working and the scaffolder is trained and qualified at a level by an IRATA (Industrial rope access trade association) or equivalent training organisation.

If fall arrest systems are to be used, a rescue plan, including rescue equipment, must be in place and practiced or proven for efficiency in the event that a scaffolder has to be rescued.



What happens after complex scaffold is erected?

Once a complex scaffold is built, it needs to be handed over from the person erecting the scaffold to the person using the scaffold. The steps for this are as follows:

1. Inspected and approved for use on a Scaffold Inspection Checklist by a licensed scaffolder.
2. Scaffold Inspection Tag signed and dated by a licenced scaffolder and in place at every access point to the scaffold.
3. Complex scaffold will require a handover certificate to be completed by a licensed scaffolder and issued to the site manager or supervisor. The handover certificate is to remain on site until the scaffold is dismantled.
4. Scaffold is to be inspected by a licensed scaffolder following any alterations and at intervals of no greater than 30 days.
5. Where scaffold is inspected and found to be unsafe, the Scaffold Inspection Tag will be replaced with a CAUTION Do Not Use or equivalent tag.



How do we work safely from scaffold?

While working from scaffold, controls to manage falls and dropped objects are to be implemented for the work. Workers must not climb on the scaffold or otherwise place themselves at risk of falling. Risks for workers beneath the work will need to be considered and dropped object controls such as exclusion zones, tool lanyards and netting may need to be implemented.

In order to ensure that the scaffold is safe to work from, prior to use, workers should satisfy themselves of the following:

- Check the Scaffold Inspection Tag to ensure the scaffold has been inspected within the last 30 days and is considered safe to use.
- Conduct a quick check of the scaffold for any obvious signs of tampering or vandalism.
- Report any unsafe conditions or known unauthorised modifications to their site manager or supervisor, remove the scaffold inspection tag and attach a CAUTION, Hazardous or Unusual Condition Tag in place.
- The Workplace Inspections scaffolding checklist may be used by anyone to check the basic requirements of the scaffold.



How do we manage changes to a scaffold structure?

Changes to a complex scaffolding structure must only be undertaken by a licensed scaffolder.

If a scaffold is to be modified, the scaffolder who signed the Scaffold Inspection Tag must either undertake the work or grant permission for another scaffolder to modify the structure. The person modifying the structure will sign and date the Scaffold Inspection Tag and provide a new certificate.



What training is required?

Where this procedure identifies that scaffolding may only be completed by a person holding a scaffold license, the individual shall hold the relevant scaffolding High Risk Work License as identified under the Work Health and Safety Regulations and outlined in Table 1.

Where a person is using a working at heights harness and other fall arrest / restraint equipment, the person is to be trained in Working Safely at Heights and also be trained and competent in the specific working at height equipment.

Workers must be provided with training and information on emergency procedures and the procedures must be tested and proven

Licensing is not required for simple scaffolds.


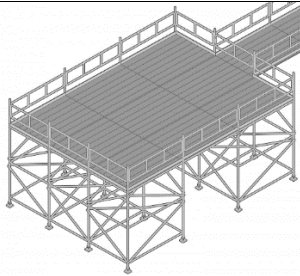
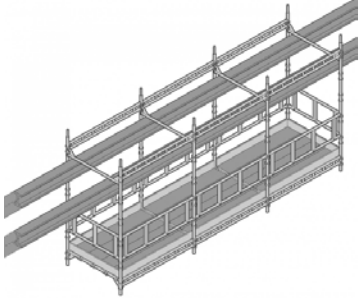
Table 1

High-risk work licence	Description of class of high risk work
Basic Scaffolding	Scaffolding work involving any of the following: <ul style="list-style-type: none">• modular or prefabricated scaffolds• cantilevered materials hoists with a maximum working load of 500 kilograms• ropes• gin wheels• safety nets and static lines• bracket scaffolds (tank and formwork).
Intermediate scaffolding	Scaffolding work involving any of the following: <ul style="list-style-type: none">• cantilevered crane loading platforms• cantilevered scaffolds

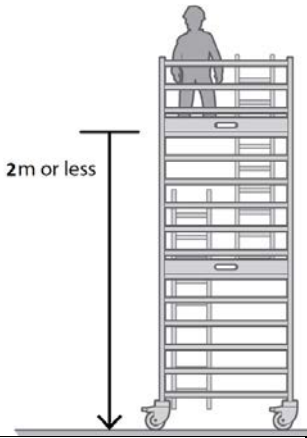
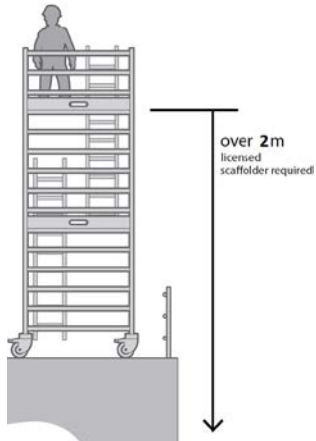
High-risk work licence	Description of class of high risk work
	<ul style="list-style-type: none">• spur scaffolds• barrow ramps and sloping platforms• scaffolding associated with perimeter safety screens and shutters• mast climbing work platforms• tube and coupler scaffolds (including tube and coupler covered ways and gantries).
Advanced scaffolding	Scaffolding work involving any of the following: <ul style="list-style-type: none">• cantilevered hoists• hung scaffolds, including scaffolds hung from tubes, wire ropes or chains• suspended scaffolds.

Appendix A

Please note: This is provided as a guide only. Scaffolding will need to be individually assessed to determine whether it is complex or simple in nature.

Scaffold Type	Example Image	Simple or Complex	High Risk Work License	Scaffold Plan	SWMS	Scaffold Inspection Checklist	Scaffold Inspection Tag	Information Tag	Handover Certificate	Workplace Inspection for Scaffold
Trestle		Simple only when fall risk under 2 Metres	Not Required	Not Required	Not Required	Not Required	Not Required	Yes	Not Required	May be used
Birdcage		Complex	Yes	Yes	Yes	Yes	Yes	Not Required	Yes	May be used
Hung scaffold		Complex	Yes	Yes	Yes	Yes	Yes	Not Required	Yes	May be used

Scaffolding

Scaffold Type	Example Image	Simple or Complex	High Risk Work License	Scaffold Plan	SWMS	Scaffold Inspection Checklist	Scaffold Inspection Tag	Information Tag	Handover Certificate	Workplace Inspection for Scaffold
Mobile Scaffold		Simple	Not Required	Not Required	Not Required	Not Required	Not Required	Yes	Not Required	May be used
Mobile scaffold		Complex	Yes	Yes	Yes	Yes	Yes	Not Required	Yes	May be used